THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

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THE FUTURE OF THE ARCHITECT

MR. T. P. BENNETT'S address to the Royal Institute of British Architects on "War Experience in the Organisation of Building Contracts" (published in our last issue) will have attracted widespread attention not only on account of his experience, both before and during the war, in large building schemes, but because it is an attempt, and as far as we are aware a first attempt, to come down to earth and face the practical and very real difficulties of building in the "post-war" world. For though in theory Mr. Bennett's lecture dealt with war experience of building contracts, yet by implication and actually it was far more a plea for the proper organisation of future peace time contracts. Whether his conclusions are acceptable or agreed with or not, this practical attitude towards what is likely to be one of the most momentous problems of our time is refreshing.

The practical problems of peace time contracts for the building of satellite towns and the rebuilding of bombed areas will be very much the same as they were for the building of large camps and Government factories, no doubt; and inasmuch as owing to the urgency of the problem, and the probable scarcity of labour and material, there is not likely to be much other work, apart from purely jobbing and repair work, for at least five years after the war, the organisation of such contracts is obviously of supreme importance. The people will not wait unduly for housing, and as Mr. Bennett very justly says, if the architectural profession cannot carry out the work quickly, then it will undoubtedly be set aside, and the contractor or the speculator employing their own staff designers will take the field. The result might be a lasting injury both to the public health and to the amenities of the country.

What then does Mr. Bennett propose? Briefly he insists that the architect must not only continue his historic function of following "an art which strives to achieve fitness of purpose in building, clothed in forms which achieve proportion, texture and beauty of detail," but he must become also an organiser, not only while the work is in progress, but also—and this is equally important—before it is commenced. He must, in fact, plan the operations to, as far as possible, the last detail, not only with regard to the conditions of the site, but as regards the accessibility as well as the suitability of the materials, before the contract is signed.

In the second place, he maintains that this organisation should continue during the progress of the contract, not, as was usual in pre-war days, by means of a resident clerk of works and occasional visits by the architect, but by the presence of an architectural member of his staff constantly on the site.

With regard to the vexed question of sub-contractors, Mr. Bennett notes, what was always known though frequently not mentioned, that the sub-contractor who designed his own work did, of course, actually make a charge, though not in the form of a fee, with a possible if not very probable extra cost to the client. He suggests that the architect should either employ directly designers of structural steel, heating, electricity, etc., or should work in conjunction with consultants. Finally, he recommends that the system of welfare now in use on all large contracts should, in fact must, be continued on similar sized undertakings, or rather on all sites where suitable living accommodation or provision for meals does not exist.

What are the practical steps to be taken to meet the post-war needs? It appears to us that the best system would be an amalgamation in one office and under one partnership of designer, organiser, site planner, and structural and electrical engineer. This has been, we believe, the American custom in large practices for some time, and there were signs of its development in this country before the war.

Such an organisation need not necessarily submerge the important æsthetic side of architectural practice. The architect at his best must of course be an artist, and there are many essentially artistic architects. But such men cannot be complete architects under modern conditions without being also good business men, or at least having the ability to supervise and direct those who are.

Mr. Bennett's paper referred mainly to large-scale post-war building developments, which will demand the utmost efficiency from those architects who may be in control of them. Apart from its moral that all architectural control must be efficient, it had little or no reference to the normal small architectural practice, which will probably continue after the war on more or less familiar lines.

We are certainly in agreement with what Mr. Bennett has to say on the subject of welfare, but it would be idle to pretend that the problem on building sites, the situation of which is constantly changing, and equally the number of the personnel to be catered for, is not very different from what it is in ordinary factories. The cost owing to these factors must always be more and this is bound to react on the cost of building. We would suggest that there is a practical method of dealing with this difficulty. The Federated bodies of Employers in both the building and civil engineering industries might form a separate non-profit-making organisation to provide all welfare accommodation, including catering, on the sites on which their members were working. The cost could be recovered by a percentage of wages. The overhead expenses of such an organisation would obviously be much lower than separate departments run by individual contractors, and it could give its employees far more continuity of employment with an added increase in proficiency. There would, moreover, be one general standard for all contracts.

NOTES AND NEWS

R.I.B.A. Council Election.

We note from the minutes of the Council of the R.I.B.A. (some extracts from which are given on page 176) that the Lord President of the Council has granted the Institute Council's request for permission to hold the Council election in 1944. Owing to the difficulty under war-time conditions of making contact with members serving overseas, these, unfortunately, will be disfranchised for this election, which will be confined to members in the United Kingdom and Eire, including, of course, all serving members.

The annual general meeting will take place on May 16, the voting in June, and the result will be announced at a general meeting to be held on June 27.

Liverpool Metropolitan Cathedral.

Speaking at the 21st annual meeting of the Liverpool Metropolitan Cathedral Building Fund, Archbishop Downey referred to the death of Sir Edwin Lutyens, and said there were some who thought that it afforded an opportunity for revising the plans and cutting down expenses. It had to be remembered, however, he said, that any alteration of the plans would throw the whole scheme out of focus. Sir Edwin Lutyens, added the Archbishop, had devoted all his great energy and talent to the work. Fortunately, knowing that his end was near, he had spent the last years of his life in completing his plans, so that his whole idea was known and the great Lutyens work could be carried on successfully and the Cathedral could become what Sir Edwin wished it to be, his monument and title to lasting fame. The conditions created by the war made it unnecessary to hasten the appointment of his successor and gave ample time for the consideration of so important a matter.

Bristol Cathedral Repairs.

Sir George Oatley, who has within the last few months made an exhaustive survey of Bristol Cathedral, in a report on the condition of the building, says ground damp has caused grave harm to the base of the two western towers, and the stonework at the west end of the nave is seriously eroded. The roof of the Elder Lady Chapel has been devastated by the death-watch beetle, which has also done considerable damage to the beams of the belfry. The huge bomb which fell in Deanery Road, shattering the windows on the north side of the Cathedral, also caused damage to the vaulting of the north transept. Other bombs which fell near the Cathedral shattered the windows in the choir aisles and the Eastern Lady Chapel. The loss would have been more extensive if the best of the old glass had not previously been removed. The roof of the Cathedral was pierced on several occasions by incendiary bombs, but though the lead roofing was damaged no fires were started.

Bristol Deanery to be Adapted as a School.

On the night of November 24, 1940, Abbey House was burnt out by incendiary bombs, and great damage was done by bombs which fell on the Cathedral School on September 7, 1940. But for many years the school has been handicapped by lack of room, and it is now proposed to use the Deanery as a part of the school. The Deanery is far too large and inconvenient as a modern residence, but, with the removal of the top storey and comparatively small alteration, it could be adapted for the use of the school.

The Dean and Chapter have issued an appeal for the sum of £25,000 to allow the work of restoration to be carried out to supplement any grants that may be received from the War Damage Commission.

Sir Henry Wood: A Concert Hall.

A Sir Henry Wood Jubilee Fund has been opened to provide a concert hall to be named after him. Appealing for donations, Lord Horder, Chairman of the Committee, and Lord Howard de Walden, Treasurer, write: The Committee is able to announce that a fund to provide a concert hall, to be named after Sir Henry Wood, is now open. This object has Sir Henry's wholehearted approval. The size and situation of the hall will depend upon the degree of support which the fund receives. Donations should be sent to the Treasurer, care of the B.B.C., 35, Marylebone High-street, W.1.

Royal Fine Art Commission.

The Royal Fine Art Commission announces the temporary appointment as its secretary of Mr. A. B. Knapp-Fisher, formerly Professor of Architecture at the Royal College of Art.

Mr. C. d'O. Pilkington Jackson, the sculptor, has been appointed a member of the Royal Fine Art Commission for Scotland in the place of Sir David Cameron, R.A., who has resigned.

Northampton Cottages' Competition.

Four Hundred and Ninety-one entries have been submitted to the Northamptonshire Federation of Women's Institutes for the Housing Competition organised by them according to the regulations of the R.I.B.A. The competition was for the best design for a pair of family cottages for rural workers. An exhibition of designs will take place in Northampton from March 20 to April 1, and a model of the prize-winning design will be on view. Mr. Darcy Braddell, F.R.I.B.A., is the assessor.

Housing Designs, Coulsdon and Purley.

At a recent meeting of Coulsdon and Purley U.D.C. it was reported that the Housing Committee had conferred with the following architects and examined layouts and designs of houses for which they had been responsible: Mr. E. G. Allen, F.R.I.B.A., Mr. A. W. Kenyon, F.R.I.B.A., and Mr. H. V. Ashley, F.R.I.B.A. The committee's recommendation—that Mr. A. W. Kenyon, F.R.I.B.A., be invited to submit a layout plan and designs for the erection of houses on the land in Limpsfield-road, Sanderstead, which the Council propose to acquire for housing purposes—was adopted.

An Appointment.

Mr. John Clapp, Deputy Borough Engineer of Bromley, Kent, has been appointed City Engineer of St. Albans.

Professional Announcement.

Mr. W. H. Ansell, P-P.R.I.B.A., and Mr. Arthur Bailey, A.R.I.B.A., formerly of 12, Gray's Inn-square, W.C., have moved to 5, Verulam-buildings, Gray's-inn, W.C.1. Telephone: Chancery 8169.

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COMING EVENTS

Tuesday, March 7.

Design and Industries Association. Mr. James Bostock on "Design for Export." Royal Society's Rooms, Burlington House, W.1. 1.30 p.m. (Buffet lunch at 12.45 p.m.)

Thursday, March 9.

A.B.T. (Manchester Branch).—Film Show on Reconstruction. Lecture Theatre, Manchester Central Library. 6.30 p.m.

Friday, March 10.

Town and Country Planning Association. Dr. Dudley Stamp addresses City of London meeting on "Decentralisation in Relation to the Scott Report." Abercorn Rooms, E.C.2. 1.30 p.m.

OBITUARY

Dr. L. H. Baekeland.

Dr. L. H. Baekeland, the scientist and inventor of "bakelite," whose death took place in New York on February 23, at the age of 81, graduated as a Doctor of Science at Ghent University in 1884, and, having married his professor's daughter, emigrated to America. His early interest was in photography, but later he devoted his time to chemical research. He began his work as one of the pioneers of plastics when he became president of the Bakelite Corporation in 1910.

Sqd.-Ldr. C. B. Marshall, O.B.E., F.R.I.B.A.

The death took place on February 22, as a result of enemy action, of Squadron-Leader Charles Beresford Marshall, at the age of 45. A partner in the firm of Marshall & Tweedy, of Newcastle-upon-Tyne, Mr. Beresford Marshall was responsible for the London office, designing much work, particularly flats. He was personally responsible for the design of the King's House, at Burhill, Surrey, presented at the Silver Jubilee to King George V by the Royal Warrant Holders' Association. Educated at Newcastle Grammar School, he began to study architecture at Durham University in the latter part of the 1914-1918 war. He joined the Army, serving in France, and was the youngest officer, at 17, in the 50th Division. He was wounded twice. A Fellow of the R.I.B.A., he was awarded the O.B.E. (Military Division) in the 1943 New Year Honours.

Owen P. Parsons, L.R.I.B.A.

The death has taken place of Mr. Owen P. Parsons, L.R.I.B.A., of Birmingham. In addition to much work in the Midlands, Mr. Parsons had recently acted as an assessor under the War Damage Commission.

From *The Builder* of 1844

Saturday, March 2, 1844. Price 3d.

As everything necessary for the public safety has already been done, for I repeatedly passed over both lines of railway at full speed on a special engine, or in the carriage attached to it, I beg leave to recommend that your lordships will be pleased to authorise the directors of the South Eastern Railway Company to open their line to Dover as soon as they shall have erected a temporary station for the accommodation of passengers.—*From a report by Major-General C. W. Pasley, Inspector-General of Railways, to the Committee of Privy Council for Trade.*

CORRESPONDENCE

[Whilst we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

"Organising to a Standstill."

To the Editor of *The Builder*

Sir,—Mr. T. P. Bennett has been in a position of vantage to watch the work of architects in war time, and what he has to say upon the subject must command attention. His address at the R.I.B.A. on February 15 last has thus been read with close attention and interest. At first sight it seems that Mr. Bennett has sensed the threat to architect-control which many architects have felt and voiced, and that he has produced the answer to the threat. Briefly, it is that if the architect wishes to remain at the head of the building effort he must organise himself for the purpose, and broaden the basis of his practice, conclusions with which few would quarrel.

Yet I venture to suggest that Mr. Bennett may be too closely linked with war-time building to have an entirely clear picture of the work that lies ahead, and that his address seemed somewhat obsessed with one aspect of the post-war task to an extent which denied a clear picture even of that one aspect.

We are apt to think of post-war architecture in terms of new towns and settlements simply because that sort of thing is the largest unit we have to face. But, if we are to set the machine running smoothly and with proper balance, we must keep firmly in mind that the arrears we have to face are not by any means confined to housing arrears, however prior the claims may be in this direction, but that it includes all phases of architectural practice. There has been a universal standstill in architecture, and the pressure from all sides will be intense and insistent; justice and policy alike call for attention to many things besides the wholesale order, and however public-spirited the nation's frame of mind may be when peace comes, the needs of the individual cannot be forgotten for an indefinite period.

When we think of things in these terms we must surely arrive at the conclusion that post-war architectural practice will differ from the normal, not so much in nature as in quantity. In other words, the practising architect must continue to retain that really amazing elasticity that was typical, say, of Wren, who could turn his energies and skill in turn from the planning of London to the safe structure and gracious beauty of St. Paul's, and yet again to the planning and design of dignified and comfortable country houses. That sort of versatility cannot be fitted within a precise framework of rigid organisation. It defies description in terms other than those of wonder and admiration.

The great Wrens have been, and will be, few and far between; but the little Wrens who have contrived to meet all kinds of situation in their time have been, and will be, legion. They are the men who have held the flag of architecture high, and who have served their times indispensably. Let us do nothing to encourage the producing of princes of architectural organisation with the princes of Industry and Finance as the model. If we do that we shall find our architects no longer able to face the unusual, no longer fit to take advantage of the twists of fortune.

Whatever the need of the moment, architecture must remain a highly personal thing in which the artist must never get too far separated from the job in progress. His is the inspiration immediately behind the skill of the craftsman, and it can never reach so far if he is removed to some pedestal at the head of a vast and ramified organisation. If he must become this in certain cases in the post-war programme, such cases must remain exceptional and as temporary as is the unusual pressure for housing accommodation.

Nor am I completely satisfied with the implications behind Mr. Bennett's references to the contractor. The good old-fashioned contractor's position is in many ways in parallel with that I have described as the architect's. His chief contribution to society is his ability to build well, with an understanding of the minute complexities which are inherent in all building, from the small to the vast. The hint that the type of war-time contractor which Mr. Bennett describes as "with civil engineering experience" is the man to answer our needs will find little support in the real building industry. Too often firms of this kind have come in and done little more than run a railway line through an open site, before delegating the actual building to a team of real builders, to whom little credit is given. We have to be very careful that the merely spectacular is not accepted as the trump card, and that we do not introduce into the organisation elements which do little more than simplify the ledgers and correspondence files, without really contributing to the building at all.

Let it not be imagined that I am belittling the importance of organisation either in the architect's or the builder's offices. I am well aware that without order we cannot hope to get the job done. But I do call a warning to the dangers of over-organisation, in which the real functions of architect and builder cease to have any more significance than that of a signature at the foot of the more important documents. I want to see it assured that in the great building era which is just ahead the architect remains an architect and the builder a builder.

F.R.I.B.A.

Surrey.

Building Methods in U.S.A. Report.

To the Editor of *The Builder*.

Sir,—You were good enough to publish my letter under this heading on February 18. May I refer to a letter which appeared in *The Times* of February 26, signed by Mr. Alfred C. Bossom, M.P.?

Mr. Bossom speaks of "age-old procedure" in referring to the practice in the United Kingdom of preparing a bill of quantities in addition to the drawings and specification. This confirms what we thought—it was evidently assumed in the Report that, because a practice is English, it must be antediluvian.

Whilst the independent quantity surveyor has, as we hope, earned some respect, this is not merely based on antiquity, as Mr. Bossom appears to think. It is a development of the last 100 years keeping pace with the requirements of contracting methods during the great expansion of building, and it has been put on a basis of accepted principles in agreement with contractors (see the Standard Method of Measurement for Building Works and the Report of the Committee on Engineering Quantities).

In the U.S.A., bills of quantities, if not prepared by the contractor himself, are made, it appears, by commercial concerns which are employed by him. It is more than 50 years since British building discarded that practice. "The London Quantity Taking Co., Ltd." (a fictitious name, but one which accurately corresponds to its modern American counterpart), would have been an early-Victorian institution.

London, W.C.1. H. J. Venning.

To the Editor of *The Builder*.

Sir,—While the Mission appointed by the Minister of Works recommend, in their Report, that American and British practice governing procedure in tendering for building work should be more fully investigated, Mr. Bossom, in his letter to *The Times* of February 26, indicates pretty clearly his preference for the American system. He gives a certain amount of recognition to the service rendered by the quantity surveyor under the British system of tendering on bills of quantities, but regards the method under which each competitor prepares his own quantities as conducive to more "realistic" and careful analysis of costs, and therefore closer and lower tendering.

There seems to be some confusion of thought here. Realism in tendering is dependent on the accuracy of the particulars on which the tenders are made up. If each of, say, twelve contractors prepares quantities for a projected work, there will be twelve different approaches to the same problem—what is the volume and extent of the work to be carried out—with the possibility that no two sets of quantities will be exactly alike. This vitiates the principle of true competition from the very beginning. Realism in tendering, in the most literal sense, can only be obtained when estimates are prepared from identical premises—*i.e.*, with bills of quantities forming part of the contract documents.

Again, it can hardly be contended that when a builder makes up an estimate on quantities prepared by himself, he goes more carefully into costs than if he has a bill before him prepared by a qualified surveyor. In either case, he has to set down what he considers to be the values of the various classes of work to be performed. He has to exercise his knowledge and skill as an estimator quite irrespective of whether he or someone else has calculated the quantum of work to be executed.

If there are advantages in the American system, for which I suggest no case has been made out, complete silence is maintained about the disadvantages.

Without priced quantities attached to the contract, there is no instrument to govern the value of deviations from the original proposals. It is only in Utopia that building contracts are completed without variations. The fairest, as well as the most scientific, method of valuing variations is by reference to the prices on which the original tender or contract sum was arrived at. This is not to suggest that without such an instrument contractors would be free to charge what they pleased for variations, but merely that machinery for assessing the value of departures from contract proposals would simply be non-existent.

The multiplication of unnecessary processes, or rather the same process repeated many times over by different people, is wasteful in the extreme. In these days of rationalisation, there can be no defence to the accusation of extravagance when many people each prepare bills for the same work. The system was abandoned many years ago in the interests both of accuracy and economy.

Finally, the adoption of the American system would deprive the industry and the building owner of those professional services which the quantity surveyor, by his technical skill and his independence of judgment, is specially qualified to render. Over a long course of years he has gradually won for himself a position intermediate between the two parties to a building contract, and in consequence as acting in a semi-judicial capacity in cases where differences of opinion as to values arise.

Balbus.

TO THE EDITOR OF *The Builder*.

SIR,—Both Mr. Venning and Mr. Alcock in correspondence in your columns seem to have missed a most important comment on that section of the Report with which they are concerned. The recommendation to which they refer is based on a definite misstatement of fact, and will probably, therefore, not be found to stand the test of full examination.

Section 47 (b) of the Report says: "Since remeasurement is eliminated . . ." and Section 49 (b) "The British method of supplying quantities involves remeasurement on completion for the adjustment of accounts."

In building work before the war I think it can be said quite definitely that remeasurement was the exception. Granted that variations were often substantial, involving a good deal of work in adjusting accounts; but this was due rather to lack of full information supplied to the quantity surveyor, which the supply of complete working drawings and specification recommended in section 46 of the Report would remedy.

Where a contract is let on a schedule and remeasurement is contemplated from the first, as is common in engineering work and is now a regular war-time practice for building work, the preparation of the schedule does not involve anything like the time or cost involved in the case of an accurate bill of quantities.

If premises are wrong, it quite often follows that the conclusion is wrong!

J.

TO THE EDITOR OF *The Builder*.

SIR,—It is very interesting to read the summary of the Report on the recent mission to the U.S.A., but whilst there are several points which should receive attention, the main recommendations are far too harmful to our industry and professions. My criticism is based on a practical and working point of view:—

(a) The Report mentions considerable difference in the rates of pay of craftsman and labourer. I would suggest that no great change can be justified in this country until a system of grading all operatives is adopted; under the present arrangement there is nothing to prevent an adventurous labourer leaving his employer (providing he has his release) and working with the next as a craftsman. My solution is that all operatives should undergo a test by an examining body represented by the various Trade Unions and employers; on the result of this examination grading could take place. When the quality of an operative's work improved, application could be made for upgrading. It is only in this way I foresee any great distinction between craftsman and labourer.

(b) It is not clear, especially when the summary of the Report refers to a "high degree of standardisation" and mentions that "factory produced parts" are used, why craftsmen should be so much higher paid. Surely the assembling of such parts is semi-skilled.

(c) Regarding tenders, certainly there can be no better method of tendering than on a properly prepared bill of quantities. Not only would I suggest that our present method be maintained, but that the quantity surveyor should be in the direct employ of the building owner; this would then put the surveyor in a position to advise the owner and the architect on economy.

Further, consider the waste of time when a competitive tender is wanted; Should ten contractors be invited, this would require ten surveyors to take off quantities instead of one, and all these surveyors would want paying for their work at the building owner's eventual expense. Finally, consider the trouble in settling accounts. There are always variations, however carefully an architect has prepared his drawings and specifications. Surely an architect is not the best person to measure and value such items. I feel, and think this is the unanimous opinion of the industry, that quantity surveyors have done a great deal to improve the conditions of tendering and they should be encouraged to continue their work.

I sincerely hope the professional institutes will take this matter up, and suggest a debate in the industry, which would, I am sure, settle the points at issue beyond all doubt.

EDGAR A. WRIGHT,
L.I.O.B., A.I.Q.S.

67, Downs Park-road,
Hackney, E.8.

TO THE EDITOR OF *The Builder*.

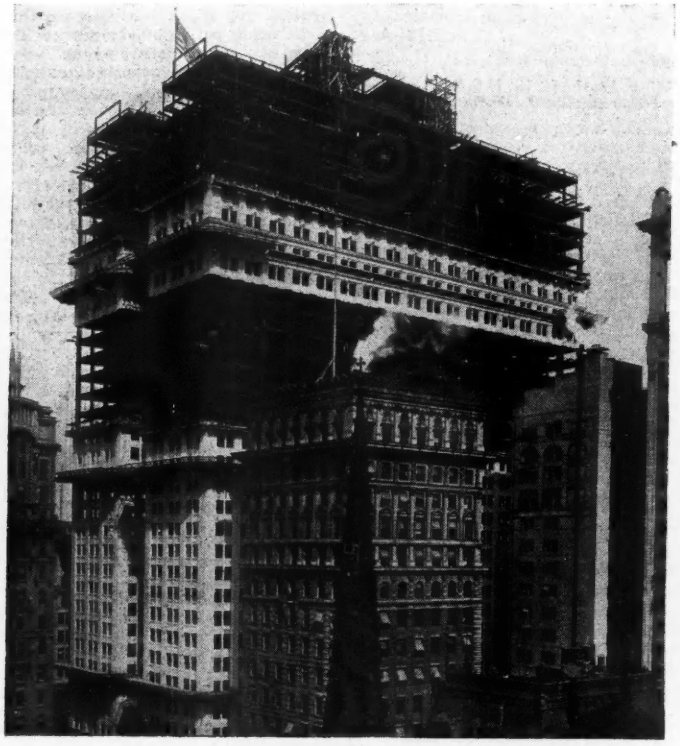
SIR,—In the report of the Mission appointed by the Minister of Works to study and report on building methods in the U.S.A. the following passage occurs: "Time is saved in American building by simpler preliminary procedure. We would particularly mention that there is no law of Ancient Lights. We suggest that your Ministry, in conjunction with the Ministry of Town and Country Planning and the Health Departments, review American practice in this and similar matters and examine the possibility of reducing the time, labour and expense involved in making settlements and reaching decisions preliminary to building in this country."

As one who has been retained in right of light cases in the High Court for many years and as the author of technical matter on the subject, I am deeply interested in this recommendation. If the Minister of Works would appoint a Committee composed of members of the Bar, who have had special experience in right of light cases, and of technical specialists, both in the measurement of daylight and the assessment of depreciation in the rental value of buildings, in consequence of infringements, in addition to the Ministerial representatives, I believe that progress might be made on the lines indicated.

I must, however, question the accuracy of the statement that there is "no law of Ancient Lights" in the U.S.A. I dealt with this matter, at some length, in the second volume of my book on "Easements of Light," published in 1933. The position appears to be that, at the present time, there is no means of acquiring a right of light by prescription in New York State and certain others. There was once, and I understand that some Americans hope that there may be legislation, before long, that will make it possible for normal conditions of natural illumination to be preserved in the interiors of buildings. The condition that has resulted from the present lack of appreciation of the importance of preserving normal lighting amenities is illustrated in the frontispiece of my last contribution to the subject: "Easements of Light: Synopsis," which appeared in 1938. When we recall the deplorable consequences of insufficiency of daylight in the interiors of buildings, we cannot fail to realise how regrettable has been the lack of control by the authorities of certain States in the U.S.A. We have to remember that, in erecting new buildings, it is our duty to consider the well-being of the occupants and not only the financial results, from the point of view of the investors, and the speed with which the work can be completed.

JOHN SWARBRICK.

Temple, E.C.4.



An American building, showing Encasing Process going on at two levels. (See Mr. Fenn's letter.)

To the Editor of *The Builder*

Sir,—I was interested in the report on the methods of building in the U.S.A., particularly as I paid a visit there some years ago with the idea of trying to get information as to where the Americans were in front of us.

After a tour of a large number of industrial centres I came to the conclusion that the American building industry was rather more highly organised in the handling of their big jobs. Very specially trained men were used to ensure that the greatest possible speed was attained in every branch of the operations; the "Co-ordinator," whose job was to regulate deliveries so that all the essentials of the work arrived on the job at the right time, being a very important member of the staff. The rapidity of the steel erection, which included the iron framing for staircases, and the early pouring of the top and some intermediate floors to give floor space, and the quick erection of hoists, were all points which were carefully thought of and a full advantage taken.

My visit was made some years ago, and I know from experience that our technique in these matters has greatly improved. The accompanying photograph of a building erected by Messrs. Thompson Starrett and Co., in New York, shows how the front facing of the building is started at different levels to save time. This could not, of course, very well be followed in this country owing to our restriction on heights.

Ealing, W.5. C. R. Fenn.

To the Editor of *The Builder*.

Sir,—As an Englishman who has worked in American architectural and builders' offices, I would like to comment on Mr. Venning's remarks with reference to quantities [*The Builder*, February 18.]

In England, according to my own experience, we have a very bad habit of starting building on a set of eighth-scale drawings and a few leading half-inch details, and following up hell for leather with the remaining drawings and full-size details as the work proceeds. The quantity surveyor has had to prepare a set of quantities, usually against time, with the same inadequate set of drawings, handicapped by lack of many useful details, with the result that as the job proceeds there is often much discrepancy between quantities and drawings, causing delays and adjustment and extras at the end of the job.

In American offices, speaking generally, where organisation is more thorough, all drawings and details for the job down to the last nut and bolt are made first, together with a specification, and then passed out to the contractors for pricing and an estimate. Their job is usually simple, time-saving and direct as a consequence. I worked on the quantities of one large Washington government building designed by architects Zantzinger, Borie and Medary, of Philadelphia, and was amazed at the magnificent and thoroughly complete set of drawings, covering all specialist services and every detail, together with a very full specification. This method, together with carefully worked out time schedules, facilitated rapid construction and prevented those delays which are unavoidable in our own system.

I believe that, to quote Mr. Venning, "our way of issuing a bill of quantities prepared on well-defined principles is the best means so far evolved of securing to the contractor and building owner a fair deal and the avoidance of disputes," but would qualify this by saying *only* if a complete and exhaustive set of drawings is first produced by the architect. This requires a greater degree of technical collaboration and quicker and better organisation than are usually found in this country.

Liverpool. I. L. James.

To the Editor of *The Builder*.

Sir,—Surely the authors of the report on methods of building in the U.S.A. are not advising the return to the mid-Victorian method of tendering. The one best way, I would suggest, would be to furnish the various contractors with working drawings, including full-size details where necessary, and also bills of quantities; the contractor then has all the information for a competitive tender.

As to organisation and control, this is the ruling factor on building contracts. Management never has been as efficient as it might. Very few firms worked to time and progress schedules, and those that did seldom kept to them. Never have I seen labour costs taken as a basis for future tenders.

A good deal of brushing-up is necessary if the best results are to be obtained.

A. Walker
Leicester. (Engineer).

The Severn Barrage Scheme.

To the Editor of *The Builder*.

Sir,—I hope you will allow me to clarify two matters where your contributor, Mr. Gedye, commenting upon my letter, makes statements which are liable to create a wrong impression [*The Builder*, February 11].

Firstly, Mr. Gedye denies my statement that the Brabazon Committee described the Ministry of Transport Scheme as "the only feasible one," but if reference be made to page 25 of their report it will be seen that the Committee say :—

> "In the seven years that have elapsed since our appointment we have examined all previous schemes for a Severn Barrage (and) have selected that which alone we think is feasible."

The disposition and arrangement of the works in this scheme which the Committee say they regarded as the only feasible one correspond almost exactly with the arrangement of the scheme which was designed under Sir Alexander Gibb's direction in the Ministry of Transport in 1920, the correspondence of the working principle, the physical features and the advantages claimed for the two schemes being so close as to leave no doubt of their identity.

The other case where Mr. Gedye makes a misleading allusion is when he refers to "reservoir storage plant" as having been first proposed by Mr. Meik, and later followed by the Ministry of Transport and the Brabazon Committee in the selected proposal.

The fact is that the Trelleck Grange Storage Reservoir to equalise power output was an original and unique feature of the Ministry of Transport scheme which was adopted later on by the Brabazon Committee. So far as I am aware this feature had no counterpart in Meik's or other previous proposal.

G. Maunsell,
Wesminster, S.W.1.

Mathematical Tiles.

To the Editor of *The Builder*.

Sir,—I have read with much interest the correspondence on this subject which appeared in your December issues. The description of the tiling, the true nature of which was disclosed by bombing at Canterbury, shows that it coincides with a form of tiling externally resembling brickwork which has long been familiar in and around Lewes. Your correspondents seem to be under the impression that this type of external walling is confined to Kent, and that it is mainly, if not exclusively, used as a "skin" or covering for ancient timber-framed walling. But this is by no means the case.

Mathematical tiles were largely used in East Sussex, particularly during the period when the brick tax was in force (1784-1850); and as pointed out by Mr. Nathaniel Lloyd in his "History of the English House" (p. 281), these tiles were nailed to wooden studding or boarding. They formed the outer walls of large numbers of houses erected during this period. Mr. Lloyd adds that these tiles were also employed to encase the timber and plaster walls of ancient buildings, but he evidently regarded this as a secondary use.

In Lewes few, if any, of the many ancient houses show this form of tiling, but the walls of many houses built between 1800 and 1850 consist of mathematical tiles nailed to boarding. The same is true of Brighton, where one of the principal and most striking blocks on the eastern front, known as Royal Crescent, shows what is probably the finest example of this form of building to be seen anywhere. In small towns and villages in East Sussex the main walls of many houses of varying types—cottages, medium-sized houses, and even some manor houses—are wholly built of mathematical tiles. They were also occasionally used for outbuildings, and so forth : and I first became familiar with them when I examined the walls of a little gazebo in the garden of what was then my house in Lewes.

F. Bentham Stevens,
Sussex Archæological Society.
Lewes, Sussex.

[*Several other letters are held over.*—Ed.]

BUILDING INDUSTRIES NATIONAL COUNCIL

ANCILLARY SERVICES GROUP FORMED.

The first meeting of the newly-formed Ancillary Services Group of the Building Industries National Council was held on Tuesday, February 15, and was attended by representatives of the British Electrical Development Association, National Gas Council of Great Britain and Ireland, and National Association of Lift Makers. Observers attended from the Telephone Development Association.

The President of B.I.N.C. (Mr. Leslie Wallis) in welcoming those present, said that it was a great day for the building industries in that the representatives of various ancillary services were meeting for the first time as part of the organised building industries. The group principle adopted by the B.I.N.C. meant that no section could dominate the others, but that all sections had an equal status and met together as a team. The building industries had one object, namely, to produce the best possible buildings at a low cost, and the achievement of this would depend on full co-operation between the ancillary services and the other sections of the industry. The establishment of the Group as part of B.I.N.C. would be of benefit to the whole industry and to the public.

Further meetings of the Group were arranged, at which among others things the extension of the Group would be considered.

Architects' Registration Report.

The annual report for 1943 of the Architects' Registration Council of the United Kingdom is now issued from 68, Portland-place, W.1; 208 persons were admitted to the Register during the year and 248 rejected. Of 52 appeals against Council's refusal to register, 17 were allowed and 35 rejected.

R.I.B.A.

NOTES FROM COUNCIL MINUTES.

COUNCIL ELECTION, 1944.—The Acting Secretary reported that the Lord President of the Council had granted the Institute Council's request for permission to hold the Council election in 1944.

MINISTRY OF WORKS DIRECTORATE OF POST-WAR BUILDING STUDY COMMITTEE.—The final reports of the Committees on "Business Buildings" and "Walls, Floors, Roofs and Partitions," convened by the R.I.B.A., have been submitted to the Ministry of Works.

ARCHITECTURAL COMPETITIONS.—On the recommendation of the Competitions Committee the following amendments to the Regulations for the Promotion and Conduct of Architectural Competitions were approved :—

Regulation (A) to read :—

"The nomination for every competition of an assessor or assessors who shall be architects of acknowledged standing and whose names shall be submitted to the President of the R.I.B.A. for approval and to whom the whole of the designs shall be submitted."

To the paragraph reading : "The President of the R.I.B.A. is always prepared to act as honorary adviser to promoters in their appointment of assessors" add the words ". . . and it is customary for promoters to avail themselves of his advice."

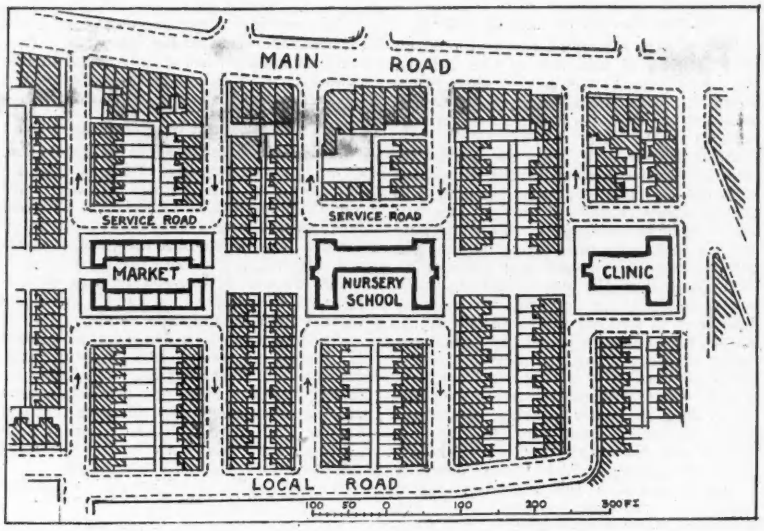
The following amendments to the "Directions for Assessors" were also approved :—

Additional paragraph to Clause 6 :—

"It is suggested that an assessor, when drawing up his award, might bear in mind the desirability of commending designs of merit which are not premiated. Such commendation would be an encouragement to a competitor and would show him that he was working on the right lines. As in the case of the premiated designs, however, care should be taken not to commend any design which in any way contravened the conditions as amplified by the answers to questions."

Additional paragraph to Clause 14 :—

"It is highly desirable that the assessor should have an interview with the successful competitor and give him the benefit of his advice."



PLAN 2.

A "SAFETY FIRST" DIAGRAM PLAN

By H. V. LANCHESTER.

THE accompanying plan (1) shows, in diagram form, a method by which all routes between the home and the essential communal buildings could be arranged quite independently of road traffic, so that there would be complete immunity from the risk of accidents due to vehicles.

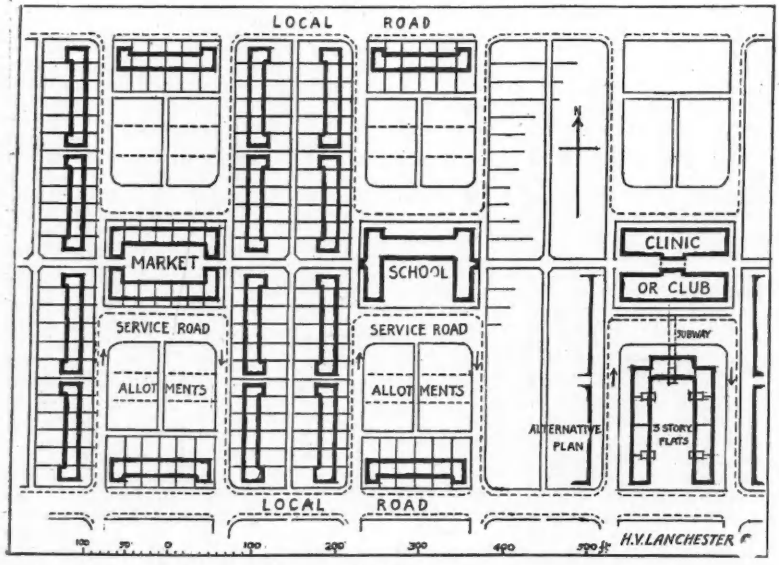
It would accommodate a population of some 60 persons to the acre (including schools, shops and other social provisions), of which 80 per cent. need not come in contact with any roadway, and the remaining 20 per cent. only with a road on which fast traffic would be physically impossible. Even this would be avoided in the alternative plan for flats which could provide, if it were desired, a density of up to some 90 persons to the acre, still retaining a fair amount of light and air.

The diagram is not intended to represent a specific plan, but rather a principle on which plans could be based. Actual plans would depend on the conformation of the site and other considerations.

The system could be expanded east and west to any extent suitable, and every four or five acre unit would provide a site for a communal centre of one type or another, proportional to the number of homes. The schools would have first claim on the more central positions, but other groups could include shops, nurseries, places of worship, clinic and club. The local library, and even an up-to-date public-house and restaurant might be considered to have claims.

It is not intended that buildings should be more than two stories high (except, perhaps, the flats, which might be on three floors), as it is undesirable to have those of greater variation in proximity to each other where open fires are in use, for in addition to the risk of eddies inducing down-draught in the chimneys at the lower levels, smoke from the lower buildings tends to make the upper floors in adjacent blocks dirty.

Plan (2) shows how the system could be adapted to existing conditions. It is taken from an area in South London that is built up to much above the density regarded as admissible, and which has been partially damaged. About one quarter of the houses would be cleared away to provide sites for the communal buildings, but it would not be necessary to make any drastic changes in the drainage and other services.



PLAN 1.

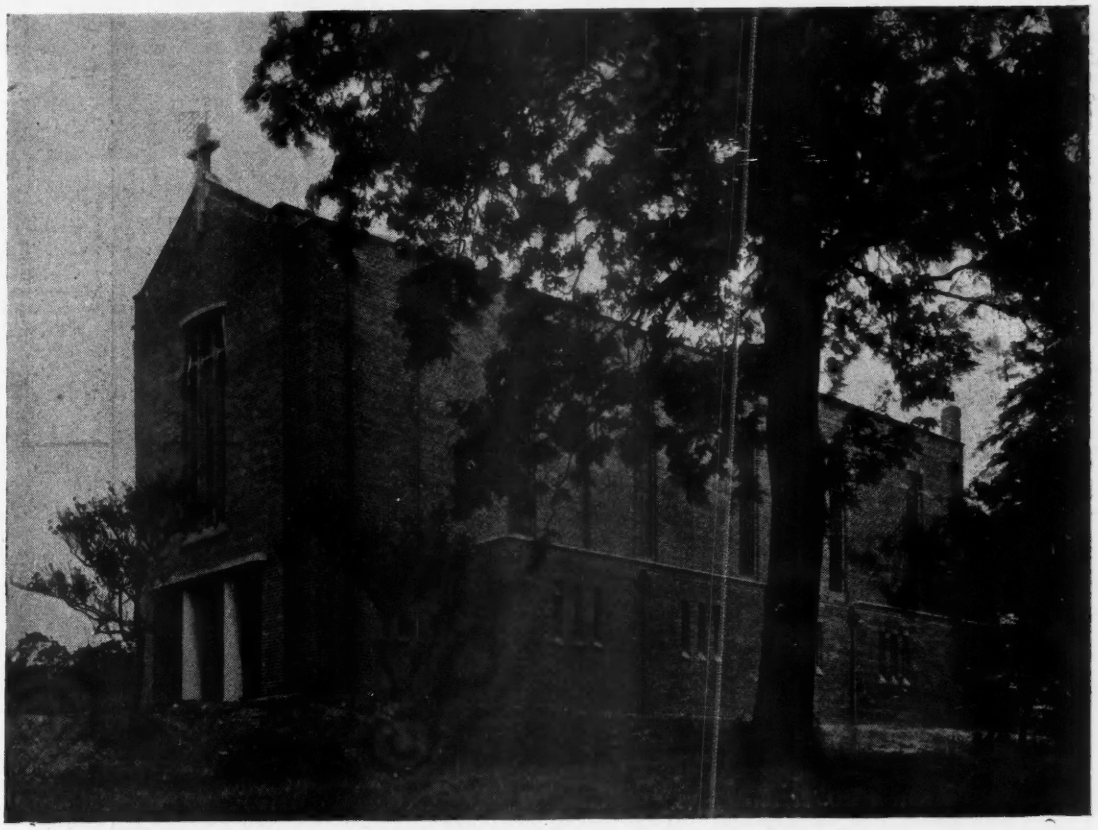
Books Received.

PLASTICS : SCIENTIFIC AND TECHNOLOGICAL. By H. Ronald Fleck, M.Sc., F.I.C. (London : Temple Press, Ltd.) Price 25s. net.

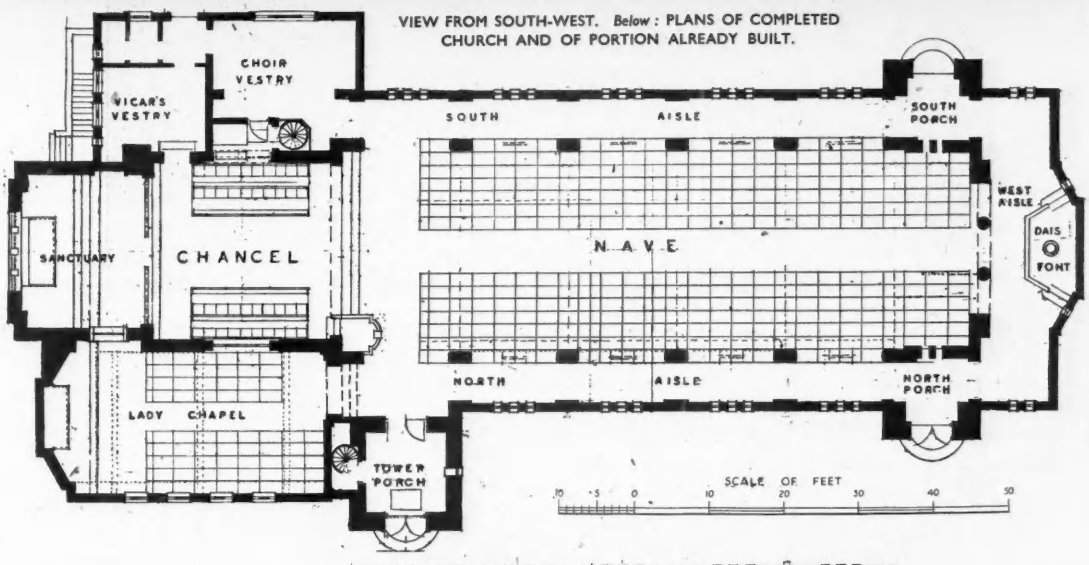
ELEMENTS OF QUANTITY SURVEYING. Third Edition. By A. J. Willis. (London : Crosby, Lockwood and Son, Ltd.) Price 15s. net.

Weekly Compensation Tables.

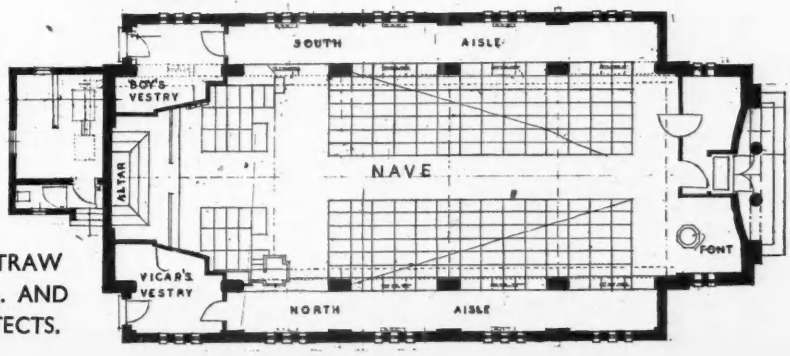
"Weekly Compensation Tables for Total Incapacity under the Workmen's Compensation Acts, 1925 to 1943, with notes on the Calculation of Partial Compensation," compiled by W. A. Harper, F.C.I.I., is issued, price 2s. 6d., by Eyre and Spottiswoode (Publishers), Ltd., 15, Bedford-street, Strand, W.C.2.



VIEW FROM SOUTH-WEST. *Below*: PLANS OF COMPLETED CHURCH AND OF PORTION ALREADY BUILT.



ST. PAUL'S CHURCH, EDENSOR, STAFFS.



WOOD, GOLDSTRAW AND YORATH, A. AND L.R.I.B.A., ARCHITECTS.

THE NAVE, LOOKING TOWARDS ALTAR.

ST. PAUL'S CHURCH, EDENSOR, STOKE-ON-TRENT.

WOOD, GOLDSTRAW AND YORATH, A. AND L.R.I.B.A., ARCHITECTS.

THIS CHURCH HAS BEEN DESIGNED FOR A congregation of 324, but at the present time only the nave has been built, which provides seating for 200 persons.

The floor is of r.c. slabs laid with "Granwood" blocks. The ceiling is flat-formed between the tie beams and meets a coved plaster cornice. Windows are of steel construction, and copings, etc., are of cast stone. The pulpit and font are built up with buff facing bricks, and temporary partitions are constructed forming the sanctuary and vestries; these will be removed at a future time when the church is completed. Owing to possible future damage by mining subsidence the church is built on a reinforced concrete raft foundation. The pillars to the nave are of reinforced concrete construction, and connected to a continuous reinforced concrete beam which in turn is connected with the flat roof of the aisles. The walls of the church are built in brindled brickwork, similar bricks being used for the interior and the exterior; also the reinforced concrete pillars are encased with brickwork. The builders were A. J. Moss, Ltd., Milton, Staffs.

ARCHITECTURAL SCIENCE BOARD

LECTURE ON CONSTRUCTION AND ARCHITECTURAL DESIGN.

MR. M. HARTLAND THOMAS, M.A., F.R.I.B.A., on Saturday, February 12, read a paper on "The Influence of New Developments in Construction on Architectural Design." In the course of this he said: It may with some justification be objected that these science lectures are merely packets of potted science for the architect, which with imperfect knowledge in any particular branch he will apply at some considerable risk. Potted they are, admittedly—even, perhaps, in the interests of portability, dehydrated. Your committee, quite unashamedly, in the conferences beforehand at which lecturers are briefed, asks for short cuts and useful approximations that an architect can employ at the sketch design stage, long before the scientific experts are called into conference. For it is important both that approximate provision for the specialist should be made beforehand, and that the architect should have enough acquaintance with all the branches of science concerned in his design to explain his requirements to the experts and to understand their advice.

There are some who fear, and rightly, that the present emphasis upon teamwork in design, and upon the architect's function as the co-ordinator of experts, might lead to the disintegration of architecture into its component parts. It is not our purpose to assist in such a disintegration. Admitted that the time has passed, and long passed, when one man, however brilliant, could carry in his own person sufficient knowledge to produce good architecture unaided. But the importance of the artistic conception persists. Indeed, the artistic conception, the vision of a building project in its entirety, as a whole, is unavoidable. It must be seen as a single idea by somebody at some stage in the work. It is the concern of architecture that the vision should be seen early, seen clearly, and seen whole. It is our concern to contribute something to the mental equipment of those upon the rightness of whose vision so much depends.

Having referred to architectural examples of the "carry over" of old forms into new situations, the lecturer continued:—

The tendency to carry over is by no means confined to matters of architectural form in the restricted sense. It also appears in structural practice. For instance, the almost universal provision of a slight fall to asphalt flat roofs. There is not the least need for this, and the grading is an addition in labour and materials. The asphalt indeed would be better preserved for a little water standing on it. The slope is a carry-over from sheet-metal construction.

A fairly common method of wall construction is reinforced concrete frame with brick in-filling to the panels. This is not a logical way of using moulded concrete, which so easily runs in broad masses of continuous walling, doing duty here as pillar, there as beam, and elsewhere merely as weather protection. The unnatural restriction of concrete into posts and beams of small section is a carry-over from steel frame with brick in-filling.

A very recent example is the compilation of tables of properties for standard sections in aluminium alloy. These sections are to be of the same shapes as those already in use for steel, although the newer metal with its different physical properties—such as a lower modulus of elasticity—demands a new range of sections proper to itself.

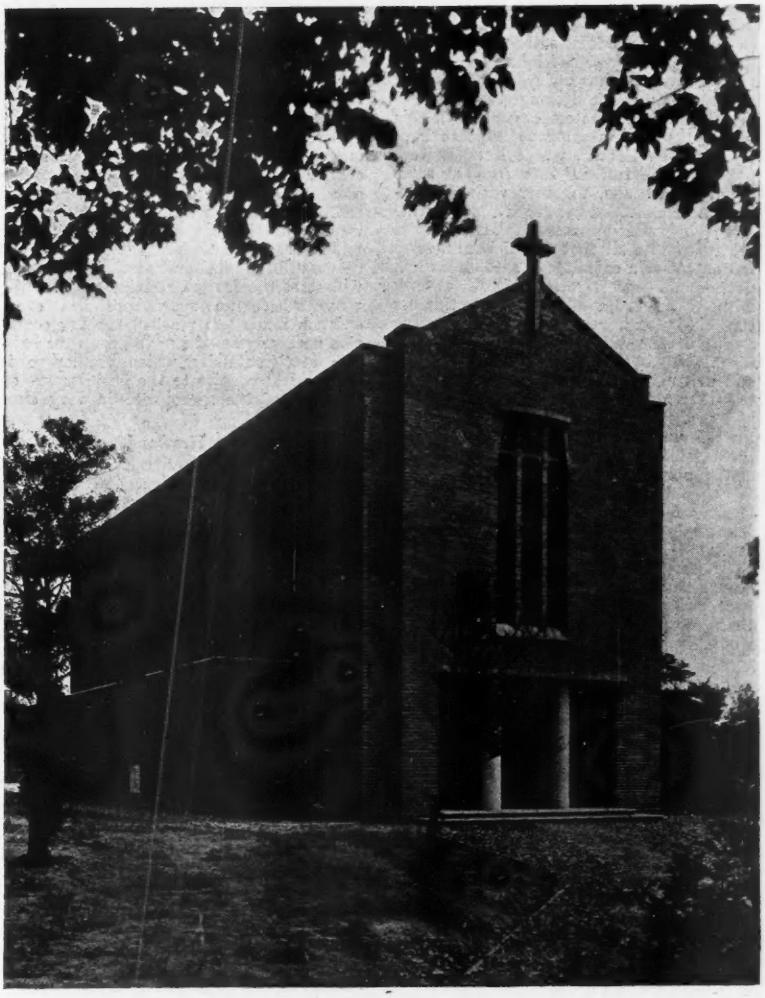
Another not so recent example comes from the early welded steel multi-storey framed buildings. It is customary in riveted construction to change the section of a stanchion at a few feet above the floor level, so as to avoid the complexity that would result if the cover plates to the stanchion and the bearings of the girders occurred together. This position for the change of stanchion section, with its awkwardness for internal finishes, was unthinkingly maintained in the early welded versions. In later examples the change occurs where it should, at the level of the floor girders.

Unity of Form.

Having referred to earlier "science" lectures on timber, metal and concrete, the speaker continued: There emerges from the consideration of these three materials—timber, metal and concrete—in their present stage of development, a suggestion of the unity of structural form. That unity is, of course, a fact of nature, but the fortunate situation at the present time is that the current technique of structural method serves to bring out that unity, instead of to obscure it. Rigidly framed structures are total structures, imagined from the first as coherent wholes, rather than by the laborious juxtaposition of many component parts. One is no longer to think in terms of stanchion plus beam, or pier plus roof truss, or wall plus floor (each being separately calculated), but to return to a conception of building that is in some ways primitive, and imagine the whole structure as one piece, as did the builders who in the past might have used the simple cruck for pillar and roof-tree combined.

But it is not to be merely a return to the primitive. We have the resources of mathematical analysis to assist our understanding of form. The unity of that analysis can be a partner to the unity of artistic conception. The closer we study the structural theory, and the results of research into the nature of materials, the better shall we cultivate that instantaneous feeling for correctness of form. The parabola of resultant forces is a mathematical conception, but it portrays a physical fact, and is an example of how science can furnish the artist with a picturable idea to give intellectual meaning to emotional appreciations of form.

When the demands of the eye are in conflict with the proprieties of structure, then the eye must be taught by the mind. The eye must learn, for example, that the sag-



VIEW FROM NORTH-WEST.

ST. PAUL'S CHURCH, EDENSOR, STOKE-ON-TRENT.
WOOD, GOLDSTRAW AND YORATH, A. AND L.R.I.B.A., ARCHITECTS.

ging line of a fish-belly girder is not weaker but stronger for its greater depth where the bending stress is greater. In the same way a two-pin arch should be deep at the supports, shallow around the points of contraflexure, and deep again in the centre. It is an offence against the intellect, and bad education for the understanding eye, to smooth away that undulating profile, which should be characteristic of the two-pin structure, out of deference to a preconceived æsthetic.

The Architecture of Humanism.

But why, it will be asked, is this of importance? May we not let taste be the final arbiter, provided that stability and convenience have had their due? It is because architecture has a contribution to make to man's realisation of his environment. Architecture can surround civilised man, as it does to-day, in a world of shams, deadening his susceptibility of intellect and feeling; or it can give him enclosures that portray the forces of nature in a manner that lifts mind and spirit can apprehend. The distinction between intellect and emotion is very largely one of verbal convenience. One has heard mathematicians exclaim upon the beauty of an abstract proposition. So it is not out of place to demand that a work of art should seek intellectual and emotional justification at the same time. Truth in architecture, the true functionalism founded upon scientific understanding, can provide the much-needed intellectual backbone to æsthetics.

MINISTRY OF HEALTH DRY-ROT MEMORANDUM

BY J. WATSON CABRE, F.R.I.B.A.

THE above Circular, No. 3/44, was distributed by the Ministry of Health, Whitehall, London, S.W.1, on January 7, to all local Councils, and published in *The Builder* of January 14, among other journals. My comment is as follows :—

It would appear, after reading the collected information in this document, that both in this and others of fairly recent date from private sources interested, such as the Linoleum Manufacturers' pamphlet, and unconsciously copied by all text-books, that our country has not gained one single advantage from the lifelong study and experiment of its greatest exponent on this subject; I am referring to the late Professor A. E. Groom, whose lectures were published in full in *The Builder* some twenty years ago, together with illustrations of the method by which the *merulius lacrymans* disseminates its laprophytic destruction on all timber and buildings to the extent of a calculated fourteen million pounds damage total in 1914, twenty millions for 1920, and, say, double this for the 1943 total. Councils are becoming aware of the illimitable possibilities for damage that this fungus is developing, and if it is still dealt with on the assumption that propagation is by the ripe sporophore shedding some "2,000,000 spores per minute for a number of days from one such fruit body one foot square," as quoted under "Nature of Dry Rot, No. 2," then I am of the same opinion as the late Professor A. E. Groom, that we are "barking up the wrong tree," and allowing our built-up areas, both new and old, to become "dry-rot contaminated areas" sooner and more intensively than need necessarily be the case, for such energy that we may devote to the alleviation would be wrongly directed.

The professor constantly reiterated that under the most favourable conditions for this rot growing he could but germinate one spore in a million in his laboratory, and he had found that the prevalence of *merulius lacrymans* was due entirely to another cause, for whilst the edible *agaricus* or mushroom would grow from its spores or spawn, this was not the case with the greatest enemy of all the approximately two hundred and seventy five timber-attacking fungi, for this *merulius lacrymans* is the most prevalent and fastest growing, and I would say is more destructive than all the other fungi taken together.

So we arrive at the point that the great dissemination is not due to spores, but from the visible size of root termed the *mycelium*, and that this under a microscope appears like what might be best described as a string of sausages or attached cells, and these root cells, together with the surrounding timber, dry up when the invisible *hyphæ* roots have extracted all available food from the timber near by.

This now dry timber first drops into small fragments and then to dust, and with it the dry *mycelium* roots, each cell naturally severing itself from the once-continuous string; with the natural ability to seal up at each end, it becomes invisible to the naked eye and is spread all over the country, but more particularly surrounding the crime, for crime it is when all timber affected is not burnt in the room where the rot has occurred.

Each of these sealed cells of *mycelium* is capable of growing on falling into a crevice in timbering or even in the centre of a sandbag, where it will grow through to the wall of the house abutting to find its food in timber; or it may be brushed under basement shelter posts or cills by the assiduous shelter marshal, where it will start the fungus growing all over the place where no sporophore has ever existed, much less reached the dry condition necessary to wither and snap the hair-like sterigmata by which the spore is attached in couples to the basidiospore on the gills of the sporophore in very close formation.

Cells Carried on Firewood.

The dry *mycelium* cells are carried about to my knowledge, and where no sporophore existed, on firewood removed from each attack where this is foolishly allowed; by workmen's clothes, tools, and the lorries that carry the badly affected and other timber long distances by road to places where it may be sorted and inspected by the Authorities so that every penny possible may be recovered by such sales that can be arranged.

All this, and more, rapidly transforms a built-up or other area so treated to this indiscriminate and foolish distribution of these deadly dry cells into just another contaminated area.

The numbers of people without any knowledge of what they are doing already will only multiply all too easily when Circulars from the Ministry do not clearly define that all affected timber should be burnt on site immediately in the room concerned, and timber left in should be well sprayed, including the adjoining surfaces and even site concrete, with either the customary but now expensive bi-chloride of mercury at ½ oz. per gallon of water, or the sodium fluoride at 6 oz. per gallon of water now used.

With a similar deadly disease in cattle, the latter are destroyed and burnt, and in the work of closing and disinfecting the area even the boots and clothing of anyone having to pass outside; it is not a whit more important than is this dry *mycelium* cell distribution of the *merulius lacrymans* disease.

In badly affected or contaminated areas some experienced local councils have added to their bye-laws so that all architects' and other plans submitted indicating hollow timber floors must have marked upon them approved floor ventilation brick positions at 5 ft. apart, and in all external and internal angles, and all walls below this ground floor to be open or honeycomb built, bar to the party wall, unfortunately; will the Ministry of Health please notice?

If the councillors of the councils of our Local Authorities could but see how this fungus is spread through the absence of segregation and the immediate burning of all timber taken out in the fireplace of the nearest affected room, they would rise in horror to enforce these procedures in all cases, with a demand for a heavy fine for contravention by anyone whatsoever, even if armed with an Order in Council, as I was recently told.

It is of little use "passing the buck" down to the house owners, when it is quite impossible for *merulius lacrymans* to start unless the dried *mycelium* cell contamination has been distributed to a suitable spot for germination in one of the following forms—even if the timber is well seasoned, dry and well ventilated—as a

1. Small piece of timber in which *merulius lacrymans* is or was growing, in damp or dry condition respectively.
2. A mere splinter of dried rotten timber containing one or more dried and sealed *mycelium* root cells.
3. Dried dust dropped from the wholly devoured and dry centres, which is now composed of dirty, powdered cellulose, but in this are many of these dried cells of the *mycelium*.

Professor Groom used to compare these little cells of dried roots with the small chips from the roots of the Japanese anemone, each fragment of which will pop up into full growth years later.

So much for the method of propagation, with site burning as the only remedy to prevent surrounding contamination as much as possible.

There is, however, another point; extraneous dampness, although a hastener, is not essential, for as the name Lacrymans implies, it is the weeping rot. Even its invisible hyphae have the power to attract moisture as required to aid its growth, and it can be seen hanging in drops even three-eighths of an inch or more from the underside of floor boarding attacked, or on the framework of a cupboard, etc., and these drops are one of the signs for recognition of this most dreaded form of fungi, and they would drip off or run away by sheer force of gravity if they could but escape.

Again, the stated amount to be cut away is given at 12 in. to 18 in. beyond the last visible sign of the attack. What is the last visible sign of attack when its hyphae are invisible and may be even yards away? Apparently from experience the allowable safety distance is too limited, for to most people the hole in the floor and the visible *mycelium* are the visible signs, but a whole floor may be affected with a small hole in one corner and hardly any *mycelium* may be found.

It would appear that properly trained men are urgently required with practical experience. Only by avoiding the ancient mythological shibboleth that the spore causes the damage instead of the dried and invisible root cell, and that there is money to be recovered by selling affected or even apparently sound timber removed after endeavouring to cut out an attack, can real progress be made.

To put it mildly, there must be quite a number of authorities who, however unconsciously or unbelievingly, have greatly added to the density of contamination in the soil of their areas since the advent of timber basement and trench shelters, and whilst touching the latter it is useless looking for mycelium after a month's sun on an exposed trench, for by then it is dried up and fallen away through wind and rain to attack as and when the chance may occur, as separated cells.

It is not the slightest use for anyone not openly and avowedly wishing to do still further harm to our timber work wherever it may be situated, to put this matter aside by any suggestion that the opinion of authorities on this subject differ; they do not do so. It is the biological theory that is so often reiterated in books and published articles that is so hard to refute, and the late Professor Groom was not only supreme in biological knowledge, but also in the experience of practical experiment and long standing applied knowledge in dealing as expert with buildings affected, and the legal aspect that so often accrues therefrom.

There is one point that is of great interest and concerns this contamination of land. Exactly how long do these dried-up invisible cells of mycelium, visible only as an original root, live in the ground as minute germinating tubers or inoculate? Let us hope that they do not compete with the proverbial wheat from the Pyramids, for as a long-term interest this is very important, and an answer could eventually be given by the Forest Products Research Laboratory, Princes Risborough, Aylesbury, Bucks, after a long series of experiments rather more complicated than the simple insertion of an inoculum cut from a live fungus-ridden floor into a square of floor as used for testing and covered with various impervious materials to hasten growth, reports and conclusions to be made thereon. In the case of my question, a very lengthy test would have to be made before results, or average results, could be given; the microscopic segregation from each dated dry timber specimen and its keeping in natural conditions for years would be a real test indeed for any laboratory interested. Simply what is the longevity of these dried cells left lying about and spread broadcast by the multitude? Just as people used to throw their sewage through their open windows into the road, another plague is now being reaped.

AN EXHIBITION JOINERY STAND.

The photograph shown here illustrates the display stand which has been recently completed at the Building Centre for the English Joinery Manufacturers' Association (Incorporated).

In order to create a timber atmosphere to the display, a permanent background of narrow-width tongued and grooved Columbian pine boarding is employed for lining the walls, and the flooring is finished in 12 in. squares of birch plywood. The large frame in the foreground of the stand is provided for the display of descriptive matter and such items as windows, doors, etc., which require to be viewed and examined from two sides.

The present display shows a range of kitchen cupboards (in conjunction with other kitchen equipment) which were developed in collaboration with the Association for Planning and Regional Reconstruction in connection with their Report, "The Hub of the House." Further research is now being undertaken.

The stand was designed by Mr. Frederick MacManus, F.R.I.B.A., who is the Advisory Architect to E.J.M.A.

A.A. SCHOLARSHIPS IN ARCHITECTURE, 1944

The following Scholarships in Architecture are tenable at the Architectural Association School of Architecture, London :—

The Leverhulme Scholarship.

This Scholarship provides the opportunity for students who could not otherwise afford it to obtain qualifying training over a period of five years for the profession of Architecture. It is of the value of £1,000, and its provisions are as follow :—

(1) Payment of tuition fees (£75 per annum); (2) an annual allowance of £10 to cover subscriptions, working materials, etc.; (3) maintenance allowance of £10 per month; (4) an allowance of £20 for travel in the British Isles during the fourth year; (5) an allowance of £40 for travel abroad during the fifth year.

Candidates must be of British nationality, must not be below the age of 17 years, and should have reached school certificate standard. They may be required to sit for a written examination on general subjects and to come before a selection committee for an interview.

The Minter and Sir Walter Lawrence Open Entrance Scholarships.

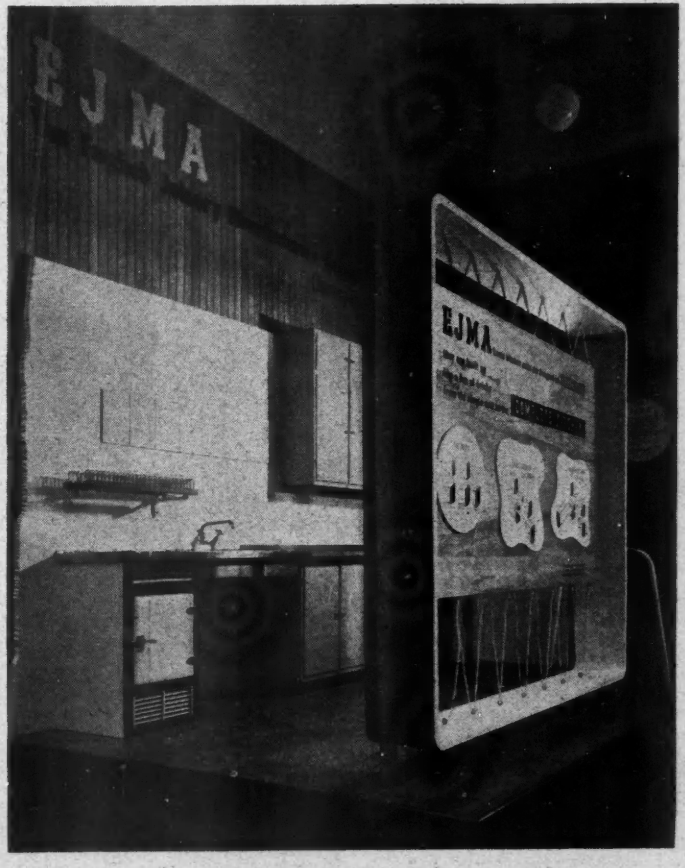
These scholarships, value £75 12s., entitle the holder to free tuition for the first-year course at the Association's School of Architecture, and are open to candidates who are under the age of 19 years on July 1 of the year in which they compete.

All entries must be accompanied by a portfolio of drawings, and must reach the Secretary of the Architectural Association, 36, Bedford-square, London, W.C.1, on June 1 in each year in the case of the Leverhulme Scholarships, and on July 1 in each year for the Open Entrance Scholarships.

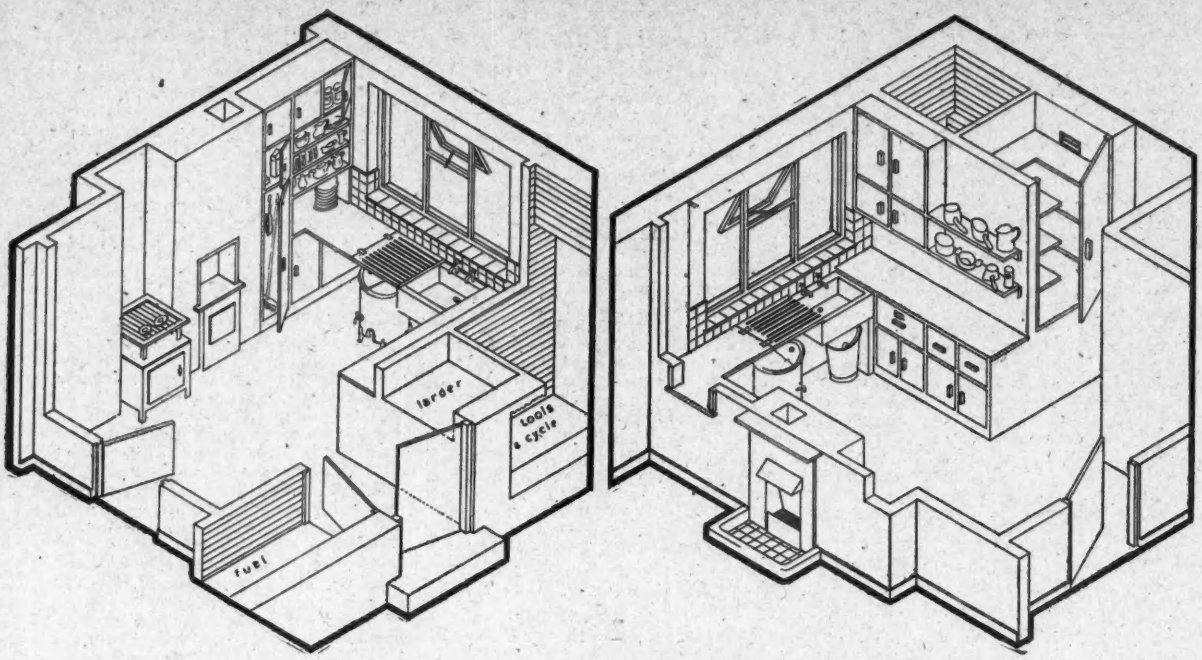
Application forms and further particulars may be obtained from the Secretary of the Association to whom all communications should be addressed, at 34-36, Bedford-square, W.C.1.

Housing and the Water Main.

A suggestion for preventing ribbon development along roads in the future is being put forward in a memorandum by Major Hart-Synnot, Bursar of St. John Baptist College, Oxford. He points out (writes a correspondent) that builders and landowners normally receive the blame for undesirable housing developments, such as the building of houses along the margin of arterial roads. In truth, he writes, the public authorities have been at fault. It is right to bring water mains along roadsides. Intelligent planning by local authorities, guided by wise central regulations, however, would have provided branch-pipes at right angles to the main, and house connection would have been allowed to commence on these branches only when far enough from the main road. Similarly, in the multitude of plans now under discussion, if the authorities distribute their water supplies wisely, housing is bound to follow the water pipe.



AN EXHIBITION JOINERY STAND.
Designed by Mr. Frederick MacManus, F.R.I.B.A.



PROPOSED KITCHEN-SCULLERY, LEEDS POST-WAR MUNICIPAL COTTAGES.
(SEE REVIEW OF "OUR HOUSING OBJECTIVE.")

BOOK REVIEWS

"Our Housing Objective." By the Rev. Charles Jenkinson. ("Design for Britain," Second Series, No. 23. Dent. Price 6d.)

This booklet has one great merit. It is written by a man who knows what he is talking about. Also, what he has to say, he is able to say directly, concisely, and with a feeling of conviction. He does not lose himself in wordy generalisations, but comes forward with conclusions derived from practical experience. He knows the conditions of life in an industrial city, having been Vicar of a slum parish; and as ex-Chairman of the Housing Committee of Leeds Corporation he has been actively engaged in promoting schemes for the better housing of the people. This booklet, indeed, is not a study of housing in general, but a critical summary of what has been carried out in Leeds. On every page it reveals a balanced judgment and sound common-sense. Mr. Jenkinson is alive to the merits of flats as well as houses—and in Quarry Hill flats, Leeds has the largest block of "working-class" flats in this country; but he says that "all evidence shows that the overwhelming majority of families with children prefer houses." In the development of cottage estates, however, he stresses the need for a variety of accommodation, with a proper percentage of one-, two-, three-, four- and five-bedroom dwellings, the first of these principally for aged persons. As regards design, he recommends the employment of qualified architects and rigid control by local authorities acting on competent advice, while as a corrective to bad building he advocates a National Code of Building Standards enforced by law under penalties. Equally important as the elevations are the interior amenities of houses, and, by way of indicating what can be provided to improve the domestic workshop, two isometric drawings are given in the booklet, showing the kitchen-scullery proposed for the Leeds post-war municipal cottages. These drawings are here reproduced. They show a scheme which has many commendable features, though there are points for criticism. A back-to-back grate is installed in the dividing wall between the living-room and kitchen-scullery, and a note is appended that after the war there will be an improved model enabling the fire to be in either room, at will, thus obviating the necessity for a fire in the living-room in summer time. The provision of a gas cooker as well as this combination grate seems unnecessary (an up-to-date gas ring on a bracket fitting would meet any needs for quick heating of liquids), and the cooker is rather unhappily jammed into its recess. The washing-up arrangements are in a good light under the window, and the draining-board extension on the left, into what appears to be a service hatch, facilitates the clearing away of meals; but the draining-board is on the wrong side of the sink. The most questionable feature, however, is the provision of a wash-boiler underneath. There is now a consensus of opinion that home laundry work should not be done in the kitchen at all (where, incidentally, dry stores have to be kept), but in the modern version of the old wash-house—the utility room.

Heating and Air-Conditioning of Buildings. By Oscar Faber, D.Sc., etc., and J. R. Kell, A.M.I.Mech.E. Second edition, 1943. Cheam, Surrey. The Architectural Press. 45s. net.

This work is not only a useful book of reference for the qualified heating engineer, but is a well-balanced introduction to the subject for the student, who will find the apparent complications which the charts, graphs and tables may suggest from a cursory glance, expounded with great clarity from first principles The definition: "Temperature is a measure of 'hotness'" measures also the thoroughness of the approach to this highly scientific subject.

The treatment of the ventilating side of the dual subject is also unusually thorough, for there is little doubt that whereas many individuals and firms describe themselves as "heating and ventilating engineers" with little justification, the interdependence of one branch with the other has had little enough acknowledgment until comparatively recent times. And there is no doubt either that there is no perfect system of ventilation possible without mechanical assistance, for the vagaries of wind and temperature have often exploded the most carefully considered natural schemes. There is certainly no more thorough exposition of air-conditioning than in this revised work.

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"CRIMINAL NEGLIGENCE"

By W. T. CRESWELL, K.C.

NEGLIGENCE has been defined as not doing that which a prudent man would do, or doing that which a prudent man would not do, when under a duty to use care; and thereby causing damage. In Le Lievre *v.* Gould (1893), 1 Q.B. 491, Lord Esher, M.R., said: "The question of liability for negligence cannot arise at all until it is established that the man who has been negligent owed some duty to the person who seeks to make him liable for his negligence. What duty is there when there is no relation between the parties by contract? A man is entitled to be as negligent as he pleases towards the whole world, if he owes no duty to them."

There are, however, certain duties to the public and individuals which are statutory although non-contractual. These are duties which arise, at common law, out of the position in which one person stands towards another or towards the public.

An outstanding example of this is the legal liability of a person whose total neglect to perform these duties or whose performance of them is carried out with such carelessness as amounts to gross negligence that eventually the death of one or more persons results. At common law, the person so negligent is liable to be charged with manslaughter. The degree of negligence which is considered as amounting to "gross negligence" is a question for a jury to determine; and this depends entirely on the facts proved in evidence. Any architect is liable to an indictment for manslaughter if his designs, under a contract, are proved not to conform to the sound principles of the science of building, after the death of one or more persons is proved to have been caused by faults in construction which followed the designs. The employer or building owner, on the other hand, would not be indicted for this offence because it is accepted in law that he does not actually or impliedly warrant the architect's designs to be carefully and skilfully prepared, although he may have approved them.

That is to say, the charge of negligence is against the architect, who has held himself out, as a person capable of designing buildings of sound construction.

As to the liability of the quantity surveyor, in general, if his bills of quantities agree with the architect's designs and instructions (and such are the quantity surveyor's methods that they usually do), the quantity surveyor would not be liable for negligence in any event. If, however, the death of any person or persons is traced to a discrepancy in the calculations in the bills of quantities, then the quantity surveyor might well be liable, and probably the architect would also be indicted with him if the negligence was gross.

And, without doubt, in certain circumstances, such as in ferro-concrete construction, where, more often than not, the architect does not give details of sizes on his drawings, but by agreement leaves the calculations for these to the quantity surveyor, and it is proved that the latter has agreed to do this work, then he would at least be indicted for manslaughter with the architect if any constructional fault or calculation caused death.

The defence to a charge of negligence must always be that sufficient and reasonable precautions were taken, that is, such as are usual and ordinary for the particular type of building, and that the architect or quantity surveyor who is charged applied such skill and care as are customary in the profession. At no time can he be held criminally responsible for a mere error of judgment.

The writer does not know of any indictment for manslaughter against a quantity surveyor, but of two against architects. There do not appear to be any reported cases.

TENDERING WITHOUT QUANTITIES

L.M.B.A. INSTRUCTION TO MEMBERS.

FOLLOWING its representation to the Government some months ago that builders should not be asked to tender for contracts over £1,500 without quantities, the Council of the London Master Builders' Association has, by resolution, amended its regulation on the provision of quantities for tendering to read as follows:—

> "Members shall undertake not to tender in competition for works exceeding £1,500 in total value without quantities being supplied. This undertaking shall not apply to contracts for repairs, painting and decorating."

The resolution is in accordance with a recent decision of the National Federation of Building Trades Employers, and its strict observance is obligatory upon all members.

Government Departments, all Local Authorities in the London area and the R.I.B.A. have been notified of the position of members in the matter.

B.S.I. Publication.

Revised British Standard for Closets for use in Air Raid Shelters (BS/ARP 43), 6d. post free from 28, Victoria-street, S.W.1.

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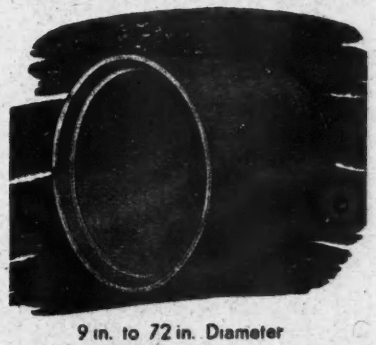

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IN PARLIAMENT

Temporary Homes.

LIEUTENANT LAWSON asked the Minister of Town and Country Planning what steps he proposed to take to see that the temporary homes to be built under the Government's two-year plan were laid out in accordance with the most advanced principles of town planning and not allowed to add to the existing problems by building more vast housing estates on the outskirts of large cities.

MR. W. S. MORRISON said that his Ministry would be consulted on layout in every case. All temporary houses under the plan referred to would be publicly owned and removed at the end of a limited period.

Local Authorities' Arrears.

MR. J. LAWSON asked the Minister of Health if he had now completed his arrangements with the local authorities of England and Wales for meeting arrears of work and maintenance due to the war; and whether plans were ready for the transference of labour from war duties as soon as such workers were available.

MR. WILLINK said he was in communication with local authorities in connection with post-war work on those of their major services, such as housing, water supply and sewerage, with which he was concerned. The distribution of available labour and materials between new works and arrears of maintenance, and also between the needs of particular services, in the period immediately after the war involved questions of priorities on which he was unable to make any definite statement at present, but the needs of local authorities in respect of their various services were present to his mind, and he would see that full consideration was given to them as soon as workers were available.

Sanitary Standards.

MR. CRAVEN-ELLIS asked the Minister of Health if the authorities responsible for administering the Public Health Act, 1875, and subsequent Acts relating to the sanitary standards of housing in rural areas of the United Kingdom had made an inspection of houses in their respective areas during the last 12 years; and what was the number of houses reported as not fit for habitation.

MR. WILLINK said that local authorities had a statutory duty under the Housing Acts to cause an inspection of their districts to be made from time to time with a view to ascertaining whether any houses were unfit for habitation. Since 1930, 33,000 unfit houses had been demolished, and 159,000 had been made fit for habitation as a result of inspections made in rural districts in England and Wales. Full particulars of the action taken under the Public Health Acts were not available, but during the three years before the war houses in rural districts were being dealt with under those Acts at the rate of 35,000-40,000 annually.

Private Enterprise in Sites.

MR. CRAVEN-ELLIS asked the Minister of Health if he would give private enterprise the same facilities as he contemplated giving to local authorities in site works, road-making and sewering, so that house building might start on the largest possible scale when building became practicable.

MISS HORSBRUGH said that when sufficient experience of the new scheme had been gained the question whether it would be practicable to extend it in the manner indicated by Mr. Craven-Ellis would be considered.

Costing Plans.

WING-COMMANDER JAMES asked the Parliamentary Secretary to the Minister of Works if the costing section of his Department was now working; and if he could now explain the considerable rise that had taken place in the cost of house building, giving an analysis of its cause?

MR. HICKS said that one of the purposes of the erection of demonstration houses was to obtain comparative costs of house building on an accurate basis.

MR. KEELING: Does not the hon. Gentleman think it is a pity that in these demonstration houses there is no sign whatever of any progress in smoke abatement, in spite of all the money which has been spent in research? Will he consider representations on this subject?

MR. HICKS: I cannot agree with the first part of the question, but the answer to the second part is "Yes."

MR. MCGOVERN: Has not the time come when houses all over the country should be all-electric?

MR. HICKS: I do not think that that would be universally accepted.

MINISTRY OF HEALTH LOANS

THE following loans were sanctioned by the M.H. during the quarter ended December 31, 1943, to Local Authorities in England and Wales :—

	£
Housing	811,563
Municipal Services (including clinics, sanatoria and mental hospitals)	132,969
Swimming Pools, playing fields, recreation grounds, open spaces, etc.	17,064
Water Supply	148,444
Disposal of Waste Products (sewerage and sewage disposal and refuse destruction) ...	100,050
Education Services (including libraries and museums) ...	58,281
Air Raid Precautions	23,615
Roads and Bridges (including private street works) ...	29,480
Other Services (including loans to defray contributions, etc., under War Damage Act, 1941-43)	158,649
Total ...	£1,480,115

COMMERCIAL ELECTRICAL REFRIGERATION

SPEAKING at the first annual luncheon of the Commercial Electric Refrigeration Association (held at the Connaught Rooms on February 23), the independent chairman (MR. E. G. BATT), after describing events leading to the formation of the Association, said that in the peace controls would certainly be required, for example, for the ordinary disposal of accumulated stocks throughout the world, whether of foodstuffs or materials. The home demand for manufactured articles might be so overwhelming that manufacturers might not sufficiently exert themselves to re-enter the more difficult field of export trade unless allocations of raw materials were made subject, for a time, to the condition that a proportion must go into goods for export. But as soon as those special conditions disappeared the case for Government control dwindled. As to export, at no time before had there been a greater responsibility than now on exporting manufacturers and merchants to make an intensive study of their job and to keep not merely abreast but ahead of market requirements. Further, standardisation was something which required careful study and encouragement. "We must, however, be careful to see that standardisation is not carried to a degree which will in any way limit the scope and ingenuity of the designer. On the other hand, where it is possible to arrange interchangeability of equipment or parts of equipment by standardisation, then it should be done."

The toast of "The Association" was proposed by Professor Sir Jack Drummond (chief scientific adviser, Ministry of Food).

NATIONAL SAVINGS

LONDON BUILDERS "SALUTE THE SOLDIER" WEEK.

Mr. Harland's Appeal.

MR. H. C. HARLAND, the President of the London Master Builders' Association, is sending the following letter to the heads of all building firms, big and small, in the London area.

DEAR MANAGING DIRECTOR,—At the request of the Lord Mayor I have accepted the chairmanship of a committee for the building industry to assist in organising London's "Salute the Soldier" Week, which opens on March 25. We have fixed our target at £250,000, and I want to reach, and pass, that figure. I want your help. How much will you subscribe?

It is no use telling me that you went to the limit last time. Probably you did. I want you to go beyond it this time. Nor is it any use telling me that the Government owes you money for work you did last year or the year before, or the year before that. I know that too, and I am urging the Government to pay up.

Having cleared up these points, I return to my question. How much will you subscribe? You get interest, of course, on your money, and to put it at its lowest, a contribution to a Government loan is a good investment. But I want to put this appeal on a much higher plane. We must save, and save, as Lord Kindersley has said, till it hurts. That is the one contribution we who have to stay at home can make to victory. We owe it to the soldiers at the front to make it and remember that they may be in France or Belgium or Holland before London's "Salute the Soldier" Week begins.

So I want you all in the building fraternity of London to weigh-in and show that you are really sincere in your patriotism.

This letter is addressed to you as the managing director of your firm, but it applies to everyone in the building industry, the technical staff, the office staff, the operatives, the typists and the apprentices.

If they are already contributing week by week—and most of them no doubt are—ask them to double their subscription for this particular week. It's our soldiers, and theirs, we're helping. That's what I want you to impress on them.

How much will you subscribe? £5? £50? £500? £5,000? £50,000? Think it over. Whatever you give will go to swell your Borough's effort as well as ours, so it works both ways.

The enclosed form tells you how to subscribe, and if you have any queries I shall be very glad to answer them. Let's all go to it. Quarter of a million, did I say? Let's make it half a million when we're at it.—I am, Yours sincerely,

H. C. HARLAND,
Chairman.

OPPORTUNITIES FOR BUILDING

HOW BUILDERS CAN HELP THEMSELVES.

MR. L. ALLEN GERRARD, director of Messrs. J. Gerrard and Sons, Ltd., of Manchester and London, has been elected President of the North-Western Federation of Building Trades Employers.

This year the Federation, formed in 1894 as the Lancashire, Cheshire and North Wales Federation of Building Trades Employers, celebrates its jubilee. It became the North-Western Regional Federation in 1914.

In his presidential address Mr. Gerrard drew attention to the statement by Lord Portal that it was the desire of the Ministry of Works that the large accumulation of maintenance and repairs to property should, as far as possible, be dealt with in order to clear the way for a new construction programme which, of course, would largely deal with houses

"I think that both builders and the public have got the idea that this work proceeds only on the initiative of the Local Authorities," said Mr. Gerrard. "This is quite incorrect. The initiative may come from the owner, either by himself or with the assistance of his proposed contractor, and I want to emphasise that the expenditure is not confined to war-damaged houses. It applies to maintenance and repair which is essential to avoid grave deterioration of the structure, and to almost any form of building which will increase the housing accommodation in a locality.

"The Local Authority is authorised to certify the necessity of this work, and if a private owner wishes to carry out this work he should fill in the licence form, and send it to the Local Authority with an application for a certificate. Thereafter the Local Authority communicates with the Regional Licensing Officer, who will issue a licence for building, and also for materials, direct to the owner. The application should not be made direct to the Regional Licensing Officer, as he has in any case to refer it back to the Local Authority.

"There appears to be a real field of activity here for building firms, provided it is more widely known, and I think builders themselves can do a great deal by bringing the provisions of this arrangement before the attention of their clients."

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 2nd APRIL, 1943

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	2/0	1/7	Cleveleys	2/0	1/7	Isle of Thanet	1/10	1/5½	Saxmundham	1/8½	1/4½
Aberdare	2/0	1/7	Clitheroe	2/0	1/7	Isle of Wight	1/9½	1/5	Scarborough	1/11½	1/6½
Abergavenny	1/10½	1/5½	Cobham (Surrey)	1/11	1/6½	Keighley	2/0	1/7	Scunthorpe	2/0	1/7
Abingdon	2/0	1/7	Colchester	1/11½	1/6½	Kenilworth	2/0	1/7	Selby	2/0	1/7
Accrington	2/0	1/7	Colwyn Bay	1/11	1/6½	Kettering M.B.	2/0	1/7	Sevenoaks	1/10½	1/5½
Aldeburgh	1/8½	1/4½	Congleton	1/11½	1/6½	Kidderminster M.B.	1/11½	1/6½	Sheerness	1/10	1/5½
Aldeburgh	1/10½	1/5½	Coventry C.B.	2/0	1/7	King's Lynn	1/10	1/5½	Sheffield	2/0	1/7
Aldershot	2/0	1/7	Cranbrook	1/10	1/5½	Kirkham	2/0	1/7	Shipley	2/0	1/7
Alfreton U.D.	1/11½	1/6½	Cranleigh	1/10	1/5½	Knowle	1/11½	1/6½	Shoeburyness	1/11½	1/6½
Alnwick	2/0	1/7	Crewe	1/11½	1/6½	Lancaster	2/0	1/7	Shoreham	1/11	1/6½
Altrincham	1/11½	1/6½	Crewe	1/9	1/4½	Leamington M.B.	2/0	1/7	Shrewsbury M.B.	1/11½	1/6½
Amble	1/10½	1/5½	Cromer	1/10	1/5½	Leatherhead	1/11	1/6½	Sittingbourne	1/10	1/5½
Amersham	2/0	1/7	Crowborough	1/10	1/5½	Leeds	2/0	1/7	Skegness U.D.	1/11	1/6½
Ammanford	1/10	1/5½	Cuckfield	1/10	1/5½	Leicester C.B.	2/0	1/7	Sleaford U.D.	1/10½	1/5½
Andover	1/10	1/5½	Darlington	2/0	1/7	Leighton Buzzard	1/9	1/4½	Slough	1/11	1/6½
Ardingly	1/10	1/5½	Darwen	2/0	1/7	Letchworth	1/11	1/6½	Smethwick	†2/0	†1/7
Arundel	1/10	1/5½	Daventry M.B.	1/10½	1/5½	Lewes	1/10	1/5½	Southampton	1/11½	1/6½
Ascot	1/10	1/5½	Deal	1/10	1/5½	Lichfield M.B.	1/11	1/6½	Southend-on-Sea	1/11½	1/6½
Ashby-de-la-Zouch U.D.	2/0	1/7	Denbigh Town	1/11	1/6½	Lincoln C.B.	2/0	1/7	Southport	2/0	1/7
Ashford (Kent)	1/10	1/5½	Derby C.B.	2/0	1/7	Littlehampton	1/10	1/5½	South Shields	2/0	1/7
Ashford (Middlesex)	2/0	1/7	Devizes	1/9	1/4½	Liverpool	‡§2/1	¶	Spalding	1/10	1/5½
Ashington	1/11½	1/6½	Dewsbury	2/0	1/7	Llandudno	1/11	1/6½	Stafford M.B.	1/11½	1/6½
Ashtead	2/0	1/7	Didcot	1/10	1/5½	Llanelly	2/0	1/7	Staines	1/11	1/6½
Ashton-under-Lyne	2/0	1/7	Diss	1/8½	1/4½	London—			Stamford M.B.	1/11	1/6½
Aylesbury	1/10	1/5½	Doncaster	2/0	1/7	12m. radius	2/1½	1/8	Stevenage	1/11	1/6½
Aylsham	1/9	1/4½	Dorchester	1/9½	1/5	12-15m. radius	2/1	1/7½	Stockport	2/0	1/7
Bagshot	1/10	1/5½	Dorking	1/10½	1/5½	Long Eaton U.D.	2/0	1/7	Stockton-on-Tees	2/0	1/7
Banbury	1/10	1/5½	Dovercourt	1/10	1/5½	Longton	2/0	1/7	Stoke-on-Trent C.B.	2/0	1/7
Barnsley	2/0	1/7	Driffield	1/10	1/5½	Loughborough M.B.	2/0	1/7	Stourbridge M.B.	2/0	1/7
Barnstaple	1/10	1/5½	Droitwich M.B.	1/10½	1/5½	Louth M.B.	1/10½	1/5½	Stourport U.D.	1/11½	1/6½
Barrow-in-Furness	2/0	1/7	Dudley M.B.	1/11½	1/6½	Lowestoft	1/10	1/5½	Stowmarket	1/9	1/4½
Barry	2/0	1/7	Dunstable	1/10½	1/5½	Luton	1/11½	1/6½	Stratford-on-Avon M.B.	1/11	1/6½
Basingstoke	1/10	1/5½	Durham City	2/0	1/7	Macclesfield	1/11½	1/6½	Stroud	1/11	1/6½
Bath	1/11½	1/6½	Eastbourne	1/11	1/6½	Maidenhead	1/11	1/6½	Sunderland	2/0	1/7
Batley	2/0	1/7	E. Glam. (Mon. Val.)	2/0	1/7	Maidstone	1/10½	1/5½	Sutton Coldfield M.B.	2/0	1/7
Beaconsfield	1/10½	1/5½	East Grinstead	1/10	1/5½	Malvern U.D.	1/10½	1/5½	Swaffham	1/8½	1/4½
Beccles	1/8½	1/4½	Edenbridge	1/10	1/5½	Manchester	2/0	1/7	Swanage	1/10	1/5½
Bedford	1/11½	1/6½	Ely	1/9	1/4½	Manningtree	1/9	1/4½	Swansea	2/0	1/7
Berkhamsted	1/10	1/5½	Epping	2/0	1/7	Mansfield M.B.	2/0	1/7	Swindon	1/10½	1/5½
Berwick	1/11½	1/6½	Exeter	1/11½	1/6½	March	1/9	1/4½	Tamworth M.B.	1/11½	1/6½
Beverley	2/0	1/7	Exmouth	1/10½	1/5½	Margate	1/10	1/5½	Taunton	1/10½	1/5½
Bexhill	1/10½	1/5½	Fakenham	1/9	1/4½	Market Harborough	1/11	1/6½	Tenterden	1/10	1/5½
Bideford	1/10	1/5½	Falmouth	1/10½	1/5½	Matlock U.D.	1/10½	1/5½	Thames Haven	2/0	1/7
Biggleswade	1/10	1/5½	Fareham	1/11	1/6½	Melton Constable	1/8½	1/4½	Thetford	1/9½	1/5
Billericay	1/9½	1/5	Faversham	1/10	1/5½	Melton Mowbray	1/11	1/6½	Thorpe Bay	1/11½	1/6½
Birchington	1/10	1/5½	Felixstowe	1/10	1/5½	Merthyr	2/0	1/7	Todmorden	2/0	1/7
Birkenhead	‡§2/1	¶	Filey	1/10½	1/5½	Middlesbrough	2/0	1/7	Tonbridge	1/10½	1/5½
Birmingham C.B.	†2/0	†1/7	Fleetwood	2/0	1/7	Middleton	2/0	1/7	Torquay	1/11½	1/6½
Bishop Auckland	2/0	1/7	Folkestone	2/0	1/7	Middlewich	1/11½	1/6½	Totnes	1, 10	1/5½
Bishop's Stortford	1/11	1/6½	Flint	1/10	1/5½	Milford Haven	1/10½	1/5½	Trowbridge	1/9	1/4½
Blackburn	2/0	1/7	Folkestone	1/10	1/5½	Morecambe	2/0	1/7	Truro	1/9½	1/5
Blackpool	2/0	1/7	Frinton-on-Sea	1/9	1/4½	Morley	2/0	1/7	Tunbridge Wells	1/10½	1/5½
Blyth	2/0	1/7	Frome	1/10	1/5½	Mundesley	1/9	1/4½	Uppingham (Salop)	1/11½	1/6½
Bognor Regis	1/10	1/5½	Gainsborough U.D.	1/11	1/6½	Nantwich	1/11½	1/6½	Uttoxeter U.D.	1/10½	1/5½
Bolton	2/0	1/7	Gateshead	2/0	1/7	Nelson	2/0	1/7	Wakefield	2/0	1/7
Bournemouth	1/11	1/6½	Gillingham (Kent)	1/11	1/6½	Newark-on-Trent	1/11½	1/6½	Walsall C.B.	2/0	1/7
Bracknell	1/10	1/5½	Glossop	2/0	1/7	Newbury	1/10	1/5½	Walsden	2/0	1/7
Bradford	2/0	1/7	Gloucester	1/11½	1/6½	Newcastle-on-Tyne	2/0	1/7	Walton-on-Naze	1/10	1/5½
Bradford-on-Avon	1/9	1/4½	Godalming	1/10	1/5½	Newcastle-u.-Lyme	2/0	1/7	Ware	1/11½	1/6½
Braintree	1/10	1/5½	Goole	2/0	1/7	New Forest	1/10	1/5½	Warminster	1/9	1/4½
Brentwood	1/11½	1/6½	Gosport	1/11½	1/6½	Newmarket	1/10	1/5½	Warrington	2/0	1/7
Bridgwater	1/10½	1/5½	Grantham M.B.	1/11	1/6½	Newport, Mon.	2/0	1/7	Warwick M.B.	2/0	1/7
Bridlington	1/11½	1/6½	Gravesend	1/11½	1/6½	Newport Pagnell	1/10	1/5½	Wellington R.D.	1/11½	1/6½
Brighouse	2/0	1/7	Great Yarmouth	1/10	1/5½	Northampton C.B.	2/0	1/7	Welwyn	1/11	1/6½
Brighton	1/11	1/6½	Grimsby	2/0	1/7	Norwich	2/0	1/7	Welwyn Gar. City	2/0	1/7
Bristol	2/0	1/7	Guildford	1/10	1/5½	Nottingham	2/0	1/7	Wells (Norfolk)	1/8½	1/4½
Broadstairs	1/10	1/5½	Guilsborough	1/10½	1/5½	Nuneaton	2/0	1/7	West Bromwich C.B.	2/0	1/7
Bromsgrove U.D.	1/11½	1/6½	Halifax	2/0	1/7	Oakham U.D.	1/10½	1/5½	Westcliff-on-Sea	1/11½	1/6½
Buckley	2/0	1/7	Hanley	2/0	1/7	Oldham	2/0	1/7	Weston-super-Mare	1/11	1/6½
Bungay	1/8	1/4	Harpenden	1/11	1/6½	Ormskirk	2/0	1/7	Weybridge	1/11	1/6½
Burnham-on-Crouch	1/8½	1/4½	Harrogate	2/0	1/7	Oxford	1/11½	1/6½	Weymouth	1/10	1/5½
Burnley	2/0	1/7	Hartlepools	2/0	1/7	Oxted	1/10½	1/5½	Whitby	1/11	1/6½
Burslem	2/0	1/7	Harwich	1/10	1/5½	Paignton	1/11½	1/6½	Whitstable	1/10	1/5½
Burton-on-Trent C.B.	2/0	1/7	Haslemere	1/10	1/5½	Peterborough (Borough)	1/11½	1/6½	Widnes	2/0	1/7
Bury	2/0	1/7	Hastings	1/10	1/5½	Plymouth	2/0	1/7	Wigan	2/0	1/7
Bury St. Edmunds	1/9½	1/5	Hatfield	1/11½	1/6½	Pontefract	2/0	1/7	Wigton	1/10½	1/5½
Buxton	1/11½	1/6½	Haywards Heath	1/10	1/5½	Pontypridd	2/0	1/7	Willington	2/0	1/7
Byfleet	1/10½	1/5½	Hednesford	1/11½	1/6½	Port Talbot	2/0	1/7	Wilmslow	2/0	1/7
Cambridge	2/0	1/7	Hemel Hempstead	1/11	1/6½	Portsmouth	1/11½	1/6½	Winchester	1/10½	1/5½
Canterbury	1/10	1/5½	Henley-on-Thames	1/10	1/5½	Preston	2/0	1/7	Windermere	1/10½	1/5½
Cardiff	2/0	1/7	Hereford	1/10	1/5½	Pulborough	1/10	1/5½	Windsor	1/11	1/6½
Carlisle	2/0	1/7	Herne Bay	1/10	1/5½	Ramsgate	1/10	1/5½	Wisbech	1/9½	1, 5
Carnforth	2/0	1/7	Hertford	1/11½	1/6½	Reading	1/11½	1/6½	Witham	1/10	1/5½
Castleford	2/0	1/7	Heysham	2/0	1/7	Redditch U.D.	1/11½	1/6½	Woking	1/10½	1/5½
Caterham	2/0	1/7	Hitchin	1/11	1/6½	Redhill	1/10½	1/5½	Wokingham	1/10	1/5½
Chard	1/9	1/4½	Hoddesdon	1/11½	1/6½	Ripon	1/10½	1/5½	Wolverhampton C.B.	2/0	1/7
Chatham	1/11	1/6½	Holt (Norfolk)	1/8½	1/4½	Rochdale	2/0	1/7	Woodbridge	1/9½	1/5
Chelmsford	1/11½	1/6½	Horley	1/10	1/5½	Rochester	1/11	1/6½	Worcester C.B.	1/11½	1/6½
Cheltenham	1/11	1/6½	Horsham	1/10	1/5½	Rugby M.B.	2/0	1/7	Workington	1/10½	1/5½
Chepstow	1/11½	1/6½	Horwich	2/0	1/7	St. Albans	1/11½	1/6½	Worksop	1/11½	1/6½
Chertsey	1/11	1/6½	Huddersfield	2/0	1/7	St. Helens	2/0	1/7	Worthing	1/10	1/5½
Chester	2/0	1/7	Hull	1/9	1/4½	St. Neots	1/9½	1/5	Wrexham	1/11½	1/6½
Chesterfield M.B.	2/0	1/7	Hunstanton	1/9½	1/5	Saffron Walden	1/9	1/4½	Wroxham	1/9½	1/5
Chichester	1/10	1/5½	Huntingdon	1/10	1/5½	Salisbury City	1/9½	1/5	Wycombe	1/11	1/6½
Chorley	2/0	1/7	Ilfracombe	1/10½	1/5½	Salisbury Plain	1/11	1/6½	Wymondham	1/9	1/4½
Cirencester	1/9½	1/5	Ingatestone	1/11½	1/6½	Sawbridgeworth	1/10½	1/5½	Yeovil	1/10½	1/5½
Clacton	1/10	1/5½	Ipswich						York	2/0	1/7

† Plus 2d. per working day. ‡ Plasterers 2/1½. ¶ Tradesmen's Labourers, 1/7½. Navvies and General Labourers, 1/6½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

NOTE.—Carpenters, Joiners and Plumbers in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowance.

For Building Trade Wages in Scotland, see page 187.

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
First Hard Stocks	4 16 0
Second Hard Stocks	4 9 0
Mild Stocks	3 16 0
Single Rough Stocks	3 10 0
Common Stocks	3 0 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

	King's Cross Station per 1,000	To sites in W.C. District per 1,000
2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	s. d.	s. d.
Pressed	56 9	63 3
Keyed	58 9	65 3
Single Bullnose	76 9	83 3
Rustics	76 9	83 3
Whites	77 3	83 3
White Midhurst Best selected (delivered London site)	£ s. d. 5 10 0	
Best blue Pressed Staffs. (London Stns.)	11 12 0	
Do. Bullnose (London Stns.)	12 2 0	
Blue Wire Cuts (London Stns.)	10 9 6	

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. 10 0 0	3 in. ..... per cwt. 12 0 0

GLAZED BRICKS (London Stns.). Add 12½% to Prices.

Best White Ivory and Salt Glazed		D'bie Str'tch'rs	38 10 0
	D'bie Headers	35 10 0	
Stretcher	30 0 0	One side&two ends	39 10 0
Headers	29 10 0	Two sides&one end	40 10 0
Quoins, Bullnose and 4½in.Flats	36 10 0	Splays and Squints	38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

ADD LEVY ON BRICKS, 3/- per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered on site London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

s. d.	s. d.
2" per yd. sup. .. 2 8	3" per yd. sup. .. 3 6
2½" " " 2 11	4" " " 3 10

CLINKER CONCRETE.

2" per yd. sup. .. 1 11	3" per yd. sup. .. 2 6
2½" " " 2 3	4" " " 3 6

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 8
Size 12 x 9 x 2½" " "	2 11
Size 12 x 9 x 3" " "	3 6
Size 12 x 9 x 4" " "	3 10

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2" 2 8	12" x 9" x 3" 3 6
12" x 9" x 2½" 2 11	12" x 9" x 4" 3 10

Per yard super d/d. Free on site, London.

Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1¼
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. .... per ft. cube	4 7
Do. do. delivered on road waggons as above stations ..... per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ¼d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10ft. and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality*. Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto ..... "	1 4½
HARD YORK—	
Delivered at any Goods Station, London. Scrappled random blocks .. per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
3 in. ditto ditto ..... "	2 8
2 in. self-faced random flags.. per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 7s. 6d. Moulded, 8s. 6d. Small section cills and copings, 11s.

SAND.

Thames Ballast	11s. 6d. per yd.
Pit Ballast	10s. 0d. " "
Pit Sand	12s. 0d. " "
Washed Sand.....	13s. 0d. " "
½ in. Shingle	10s. 6d. " "
¼ in. Broken Brick	16s. 0d. " "
Pan Breeze.....	10s. 0d. " "

} delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement. Standard Specification, delivered London area.	£ s. d.
6 ton loads and upwards site .... per ton	2 11 0
1 to 6 tons site	2 14 0
Alongside Vauxhall in 80-ton lots	2 8 6
"Ferrocrete" Rapid Hardening Cement—	
6 ton loads and upwards site	2 17 0
1 to 6 tons site	3 0 0
Alongside Vauxhall in 80-ton lots	2 14 6
"Aquacrete" Water Repellent, "Blue Circle" cement, 30s. per ton on ordinary "Blue Circle" prices.	
"Colorcrete" Nos.1 and 2, Coloured rapid Hardening Portland Cement in 6 ton lots	4 11 0
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
"Snowcrete" White Portland Cement (in free paper bags)	11 5 0
Under one ton .. .. .. per cwt.	0 13 2
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 tons lots and upwards	3 11 0
Plus packages at current prices.	
Super Cement (Waterproof), bags extra.	4 1 0

NOTE.—Jute sacks charged at 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton. Less than one ton 1s. 9½d. nett each.

Credit 1s. 6d. nett each when returned in good condition within two weeks.

£ s. d.	£ s. d.
Roman Cement 8 10 0	Keene'sCement,White 7 0 0
Parian Cement 7 0 0	" " Pink 6 10 0

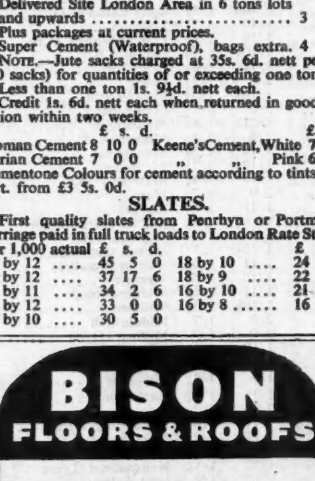
Cementone Colours for cement according to tints, per cwt. from £3 3s. 0d.

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12	45 5 0	18 by 10	24 0 0
22 by 12	37 17 6	18 by 9	22 12 6
22 by 11	34 2 6	16 by 10	21 10 0
20 by 12	33 0 0	16 by 8	16 12 6
20 by 10	30 5 0		

BISON FLOORS & ROOFS



for comparative lightness in weight

The Bison unit is not quite such a featherweight as the fellow above would have you believe. It is an important fact, however, that the oval cavity in the Bison unit effects an important saving in dead weight. Lighter structural steel and a saving on handling costs are just two of the many economies you make by specifying Bison for floors and roofs.

BISON FLOORS

CONCRETE LIMITED

GREEN LANE, HOUNSLOW, MIDDX.

Hounslow 0172

STOURTON, LEEDS, 10. Leeds 75421

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 2 6	Sirapite, Coarse	4 8 6
" White ..	4 10 0	" Finish	4 14 6
Pioneer	5 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue		Grey Stone Lime	3 1 0
Lias Lime ..	3 7 6	Chalk Lime	3 1 0
Granite Chippings	1 15 0	Hair per cwt. ..	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in paper bags, £2 12s. 6d. 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	£3 18 0
Ditto hand-made ditto	7 2 0
Ornamental ditto	7 8 6
Hip and valley tiles—Hand-made	14 6
(per dozen) —Machine-made	13 10

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	Foot cube. £ s. d.		£ s. d.
Dry English Wainscot Billets	16 0	to	0 18 0
Dry Slavonian Billet Wainscot ..	17 0	to	1 0 0
Dry Cuba Mahogany logs	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak.....			0 12 6
Jap, Figured Oak			0 13 0
Jap, Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue	per cwt.		5 0 0
Liquid glue.....	per gallon		1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes 2 in. by 3 in. to 4 in. by 11 in.	47 0 0	58 0 0

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in } 1 in. by 9 in. }	71 0 0
	Per square. s. d.
1 in. plain edge flooring	56 3
1¼ in. ditto	70 6
1 in. tongued and grooved	56 3
1¼ in. ditto	70 6

MATCHING.

	per square. s. d.
⅝ in.	40 0
¾ in.	45 3
1 in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.

M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON

½ in.	¾ in.
33/-	51/- per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
60/-	72/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
33/-	48/-	86/-	209/-	281/-	456/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
45/-	77/6	123/-	240/-	372/-	624/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
5/6	6/8	11/-	24/-	36/-	56/- per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
72/-	115/-	144/-	288/-	384/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
14/-	18/6	25/9	45/3	64/9	71/6 per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/9	13/6	25/-	37/-	46/- per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ × 6 lbs.	1½ × 6 lbs.	2 × 7 lbs.	3 × 7 lbs.
Lead P.	26/-	34/-	55/-	92/- per doz.
Lead S.	34/-	41/-	67/-	115/- per doz.

SOLDER.—Plumbers', 1/6. Tinmen's, 1/11. Blow pipe 2/3 per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(*contd.*)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &c., to LONDON STATION PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	£24	0	0
Plain Compound Girders	26	10	0
Stanchions	29	0	0
In Roof Work	35	0	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
½ in.	23	5	0	½ in.	21	15	0
⅝ in.	22	15	0	⅜ in. to 2¼ in.	21	5	0
¾ in.	22	5	0				

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

10/17

	Tubes. ½"/6" %	Tubulars, and ½"/6" %	19/24" %	Flanges. ½"/2" %	2½"/6" %
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ½"/⅜" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/5½	1/2½	4½d.
3½ in.	1/7	1/4	4½d.
4 in.	1/7	1/6	6½d.
4½ in.	1/8½	1/8½	7½d.
5 in.	2/0½	2/0	9d.

O.C. GUTTERS.

3 in.	1/10½	1/7½	5d.
3½ in.	2/1½	1/7½	6½d.
4 in.	2/1½	1/8½	7½d.
4½ in.	2/2½	1/11½	8½d.
5 in.	2/8½	2/3	10½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/2½	1/5½	2/2
2½ in.	2/3½	1/8½	2/7½
3 in.	2/8½	2/1½	3/2
3½ in.	3/2½	2/6½	3/7½
4 in.	3/8½	3/0½	4/5

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches
2 in.	3/9½	2/7½	3/2
2½ in.	4/5	2/10½	3/11½
3 in.	4/9	3/2	4/8½
3½ in.	4/10½	3/11½	5/5½
4 in.	5/3½	4/5	6/3½

L.C.C. COATED DRAIN PIPE.

	cwt.	qr.	lbs. in 9 fts.	per yard.	Bends.	Branches.
3 in.	0	3	14.	6/0	7/3	11/6
4 in.	1	1	17.	8/7	8/2	14/5
5 in.	1	2	18.	10/7	14/9	22/3
6 in.	2	0	1	12/9	17/0	29/8

Gaskin, 75/- per cwt.

	Per ton basis in London. £	s.	d.
IRON.—Staffordshire Crown, Merchant quality	18	7	6
IRON.—Staffordshire Marked Bars	19	7	6
Mild Steel Bars	19	15	0
Mild Steel Hoops	21	10	0

Ex Merchant's Stock, per ton (two-ton lots).

Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24	17	6
24 gauge	25	2	6
26 gauge	25	17	6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27	0	0
24 gauge	27	10	0
26 gauge	28	15	0
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28	10	0
24 gauge	29	0	0
26 gauge	30	5	0

	Per ton £	s.	d.
Cut Nails, 3 in. and up	28	10	0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

	£	s.	d.
Raw Linseed Oil (5 galls.) per gallon	0	6	3
Boiled Linseed Oil (5 galls.) "	0	6	7
Genuine Ground English White Lead, per cwt.	3	11	9
Genuine White Lead Paint, 14-lb. tins free, per cwt.	4	16	6
Genuine Red Lead "	2	18	6
Linseed Oil Putty (Kegs extra) "	1	5	3
Size, XD quality fkn.	0	4	9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	2/0½	2/0	1/11½	1/11	1/10½	1/10
Labourers	1/7	1/6½	1/6½	1/6	1/5½	1/5½

Aberdeen ....A	Dumfriesshire A2	Inverness....*	Perthshire A2
Ayrshire ....A	Dundee ....A	Inverurie A1	Peterhead A1
Banff ....B	Dunoon ....A	Kincardineshire ..A2	Renfrewshire ....A
Berwickshire A2	East Fife....A	Kinross-shire ....A	Rothesay ....A
Bridge of Allan ....A	East Lothian ....A	Lanarkshire ....A	Roxburghshire A2
Broughty Ferry ....A	Edinburgh ....A	Midlothian ....A	St. Andrews ....A
Clackmannanshire..A	Fifeshire ....A	Monifieth ....A	Selkirkshire A2
Doune....A	Forfarshire A2	Moray and Nairn B	Stewartry A2
Dunblane ....A	Glasgow ....A	Newport ....A	Stirlingshire ....A
Dumbartonshire ..A	Greenock ....A	Peeblesshire A2	Stornoway A2
Dumfries A1	Hamilton ....A	Perth ....A	Tayport ....A
			West Lothian ....A

*This town has its own rates : Masons, 1/9½ ; Carpenters, 1/9½ ; Slaters, 1/9½ ; Plumbers, 1/10 ; Plasterers, 1/10½ but 1/11 is paid owing to the scarcity at present ; Painters, 1/9½ and Labourers, 1/5.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 185

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	16	0
Fine do.	"	0	18	0
Fine Copal	"	1	0	0
Pale Copal	"	1	2	0
Pale Opal Carriage	"	1	6	0
Best do. do.	"	1	14	0
Floor Varnish	Inside	1	0	0
Fine Pale Paper	"	1	0	0
Fine Copal Cabinet	"	1	4	0
Fine Copal Flatting	"	1	2	0
Hard Drying Oak	"	1	0	0
Fine Hard Drying Oak	"	1	1	6
Fine Copal Varnish	"	1	2	6
Pale do.	"	1	14	0
Best do.	"	1	4	6
Best Japan Gold Size	"	1	14	6
Best Black Japan		0	12	0
Oak and Mahogany Stain (water)		0	14	0
Brunswick Black		0	9	6
Berlin Black		0	16	0
Knotting (patent)		0	17	0
French and Brush Polish		0	14	0
Liquid Dryers in Terebene		0	11	0

LEAD, &c.

(Delivered in London.)	Per ton. £	s.	d.
LEAD.—Sheet, English, 4 lb. and up	38	0	0
Pipe in coils	38	10	0
Soil pipe	42	10	0
Compo pipe	47	10	0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills.....per ton £18 0 0.

The Hall Mark AYGEE *of Craftsmanship*

AIR RAID DAMAGE REPAIRS

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THE SCOTTISH BUILDER

NEW BUILDINGS

LANARK.—Plans prepared for alterations and additions at houses, Oaklands Orchard, Hazelbank, for which the architect is John Logan, 13, Lanark-rd., Carluke.

LANARKSHIRE.—C.C. is to extend the police station at Burnbank, from plans by William Watt, Albert-st., Motherwell.

UDDINGSTON.—Plans prepared for garages, for which the architect is Edward Morgan, Townhead-st., Hamilton.

Concrete Products Guide.

A Concrete Products Guide has been produced by the Cement and Concrete Association, and should be of great value to all who require a convenient and up-to-date reference to manufacturers of concrete products in England, Scotland and Wales. An ingenious but simple index, using a sub-divided map, makes reference easy. Copies of the Guide may be obtained free on application to 52, Grosvenor-gardens, S.W.1, by Government officials, officials of local authorities, and firms, engineers and architects requiring concrete products for essential purposes.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3½
24 oz. Clear or "R" quality	5
26 oz.	6½
32 oz.	8½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	6½d.
Rough cast double rolled, ⅜ in.	7½d.
Rough cast double rolled, ½ in.	7½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	10½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s.	d.
Wire Rolled, ¼ in. thick	0	9½
Wire Cast, ¼ in. thick	0	9½
Georgian Wired Cast	0	10
"Calorex" Sheet, 21 oz.	2	6
" " 32 oz.	4	0
" Cast, ¼ in. thick	0	9½
" " ⅜ in. thick	1	0
" " ½ in. thick	1	2
Non Actinic Glass, ¼ in. thick	0	9½
" " " ⅜ in. thick	1	0
" " " ½ in. thick	1	2

"VITA" GLASS.

	Per ft. s.	d.
"Vita" Plate Glass, about ⅛ in. thick—		
To 7 ft. super	5	0
Over 7 ft. super	7	6
"Vita" Sheet Glass, about 18/20 oz.	2	0
Cathedral "Vita" Glass :		
¼ in. thickness	2	0
⅜ in. "	3	0
⅛ in. Georgian Wired "Vita" Glass	3	6

GLASS BRICKS.

	s.	d.	
P.B. 1—8 in. × 4½ in. × 3½ in.	2	9	each nett
P.B. 2—5½ in. × 5½ in. × 3½ in.	2	6	"
P.B. 3—7½ in. × 7½ in. × 3½ in.	3	6	"
P.B. 32—7½ in. × 7½ in. × 3¾ in.	3	6	"

Radiused Corner Bricks to match up with—

P.B. 2	4	6	each nett
P.B. 3	6	0	"
P.B. 32	6	0	"

LAW REPORTS

QUESTION OF £100 PROPERTY REPAIRS LIMIT.

Before the Blackpool Magistrates.

War-time restrictions upon the amount of money to be spent on repairs and alterations to property was an issue recently raised before Blackpool magistrates.

The case was one in which Fred Howarth Clegg, surveyor, Birley-street, Blackpool, and Messrs. Cryer & Sons, Ltd., contractors, Poulton-road, Fleetwood, were summoned for a breach of the Defence (General) Regulations, 1939, by carrying out work in excess of the stipulated £100 at the Empress Private Hotel.

The issue was based purely on the legal aspect, the prosecution, conducted by Mr. A. B. Barnes, succeeding, and the defendants each being fined £5. For the defence, Mr. E. Rowson gave notice of appeal to Quarter Sessions.

The facts, as outlined by Mr. Barnes, were that when the premises became derequisitioned by a Ministry, Mr. Clegg, acting on behalf of the returning tenants, arranged for Messrs. Cryers to carry out certain work at a cost of £275. It was pointed out that for work exceeding a cost of £100 it was necessary to obtain a licence, and defendants, it was alleged, had neither obtained nor applied for one.

The fact that the work had been carried out and that a licence had not been obtained was not disputed, but Mr. Rowson submitted that they had no case to answer. He supported this with another paragraph of Regulation 56A of the Defence (General) Regulations, which reads :

"Nothing in the first three paragraphs of the Regulation shall apply to any operation or work the cost of which or any part of the cost of which a Government Department has agreed to defray."

Mr. Rowson further submitted that the Ministry concerned had agreed to pay a part or the whole of the cost of the work under dispute by virtue of the statement on the requisitioning form, which stated that compensation for the building requisitioned would in due course be paid on the basis laid down by the Compensation (Defence) Act, 1939.

That, contended Mr. Rowson, was an agreement to pay, and meant that defendants had committed no offence as alleged.

Mr. Barnes, in reply, quoted the Compensation (Defence) Act, which, he said, simply provided for payment of compensation and could not be construed as an agreement by a Government Department to defray the costs.

The magistrates found there was a case to answer.

The Bench allowed costs against defendants amounting to £6 6s.

HOUSE OWNER'S LIABILITY TO ABATE STATUTORY NUISANCE CAUSED BY ENEMY ACTION.

King's Bench Divisional Court.

Before Mr. Justice Humphreys, Mr. Justice Asquith and Mr. Justice Cassels.

Turley v. King.

This case, which came before the Court by way of special case stated by the Birmingham Justices, raised the question whether Mr. Samuel Isaac King, as the owner of two dwelling-houses belonging to him, was liable to have an order made against him to abate a statutory nuisance which existed on the premises by reason of leakage in the roofs of the houses and which was attributable to enemy action.

The short facts of the case were as follows : Mr. A. W. Turley, the Chief Sanitary Inspector for the City of Birmingham, appealed from the decision of the Justices dismissing a summons which he had issued against Mr. King for failing to comply with the terms of an abatement notice which had been served upon him in respect of the nuisance which existed in the two houses in question, which were in Lupin-street, Nechells, Birmingham. It had been proved at the hearing before the Justices that the houses were damaged by enemy action in November, 1940, and April, 1941, and that as a result a statutory nuisance had existed and the proceedings now in question were instituted against Mr. King. The Justices decided that Mr. King was entitled, in the circumstances, to claim relief from the obligation to repairs in the case of war damage as provided by the provision of the Landlord and Tenant (War Damage) Act, 1939. The Justices accordingly dismissed the summons, against which Mr. Turley now appealed.

The Court allowed the appeal.

Mr. Justice Humphreys, in the course of delivering judgment, said it was not disputed that there was a *prima facie* case against Mr. King, the respondent, which would justify the making of an abatement notice on him. It was, however, contended that the order could not be made in this case because of the provisions of Section I, subsection I, of the Landlord and Tenant (War Damage) Act, 1939, which relieved a landlord from the liability to make good war damage. He (the Judge) agreed that the landlord would be so entitled as between himself and his tenant, but he was of opinion that the Justices had misdirected themselves in holding that the relief of the landlord's obligation to repair, whether that obligation arose from the terms on which the premises were let or by virtue of the provisions of the Housing Act, 1936, had anything to do with the duty of an owner of property, who had allowed a statutory nuisance to continue on his property, to abate that nuisance. The case must be remitted to the Justices with the opinion of the Court that the obligation imposed on the respondent by the Public Health Act, 1936, was not one from which he was relieved by the provisions of the Landlord and Tenant (War Damage) Act, 1939.

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FAULTY AIR RAID SHELTERS.

Central Criminal Court.

After consulting together for two hours, a jury at the Central Criminal Court, last week, found George Henry Davies, 68, a builder, of Finchley-road, N.W., and Robert Young, 62, clerk of works, of Parade Mansions, Hendon, guilty of conspiring to effect public mischief by building 120 air raid shelters for Hammersmith Borough Council in such a manner that they had to be rebuilt by the council at the cost of £17,674, and they were each sentenced to nine months' imprisonment in the second division.

They were both found not guilty of conspiring to defraud Hammersmith Borough Council of £25,119 by false pretences and fraudulent contrivances concerning air raid shelters built by G. H. Davies and Son for the council, and receiving money from the council by alleged false pretences with intent to defraud.

Mr. G. D. Roberts, K.C., for Davies, asked the judge to grant a certificate of criminal appeal. He submitted that there had been an extension of the doctrine of public mischief not covered by any previous authority, and he understood that his lordship pointed out to the jury that the duty of a citizen varied, whether it was in peacetime or war-time. These were novel points of law.

His lordship said that counsel could apply to a judge elsewhere, or to the Court of Criminal Appeal. He was entitled to make the application.

FUTURE CONSTRUCTION

The Editor welcomes authentic information for this section from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

MARCH 6.

Cork Board of Public Assistance.—Erection of sanitary annexes at Cork County Home and Hospital. R. Flavin, Acting Secretary, Board-room, Douglas-rd., Cork. Dep. £10.

MARCH 7.

Hornsey T.C.—Erection of prefabricated hut, together with building of shelter to Code Standard, and alterations to existing premises at Priory-rd., N.8. J. H. Melville Richards, B.E. and S. Dep. £2.

Ruislip-Northwood U.D.C.—Adaptation of "Sunningdale House," Eastcote, into three flats. E. and S.

MARCH 13.

Grimsby T.C.—Adaptations at 272, Hainton-ave., for day nursery. J. V. Oldfield, B.E. and S. Dep. £2.

MARCH 20.

Consett U.D.C.—Erection of 27 brick domestic shelters. T. P. Leath, Property S., Council-chbrs., Blackhill.

MARCH 27.

Montgomeryshire E.C. — Construction of canteen kitchen and dining-room at Llandysilio. T. Glyn Davies, D. of E., County Ed. Offices, Newtown. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

MARCH 15.

Bradford E.C.—External painting of various schools. City Architect.

ENGINEERING, IRON AND STEEL

MARCH 10.

Bucklow R.D.C.—For provision and laying of approx. 5,700 yds. of 3 in. dia. water main, together with other appurtenant work. H. V. Shaw, E. and S., 26, Station-bldgs., Altrincham. Dep. £3 3s.

MARCH 27.

Sunderland C.B.—Sinking of borehole at Highfield Institution. J. E. Lewis, B.E. Dep. £2 2s.

APRIL 17.

Kingston-upon-Hull T.C.—Construction of reinforced concrete forebay in River Humber and 650 lin. yds. of 9 ft. 6 in. dia. brick and concrete outfall sewer. City E. Dep. £10 to City Treas.

ROAD, SEWERAGE AND WATER WORKS

MARCH 6.

St. Albans T.C.—Laying approx. 630 yds. of 6-in. dia. pipe and construction of 6 manholes. City E. and S. Dep. £1 1s.

MARCH 10.

Twickenham T.C.—Tar spraying of roads. Deputy B.S.

MARCH 11.

Holsworthy U.D.C.—For laying approx. 1,800 yds. of 6 in. dia. asbestos cement pipes and ancillary works. N. G. Elliott, Chartered Civil Engineer, Torquay. Dep. £1 1s.

MARCH 13.

Ely R.D.C.—Providing and laying 700 lin. yds. of 7 in. dia. asbestos cement pipes. Silcock & Simpson, Consulting E., 10, Park-row, Leeds, 1. Dep. £1 1s.

Wem. U.D.C.—Surface dressing of roads. S.

ROAD MATERIALS, ETC.

MARCH 6.

Dewsbury C.B.—B.E.
Haltemprice U.D.C.—E. and S.
Ormskirk U.D.C.—S.
Shrewsbury T.C.—B.S.

MARCH 8.

Garstang R.D.C.—S.
Wortley R.D.C.—E. and S.

MARCH 10.

Conway T.C.—B.E.
Marple U.D.C.—S.

MARCH 11.

Failsworth U.D.C.—E. and S.
Haslingden T.C.—B.S.
Maesteg U.D.C.—S.
Settle R.D.C.—S.

MARCH 13.

Bacup T.C.—B.E.
Bury C.B.—B.E. and S.
Melton Mowbray U.D.C.—S.

MARCH 15.

Clayton-le-Moors U.D.C.—S.

MARCH 18.

Ashington U.D.C.—S.

MARCH 27.

Solihull U.D.C.—E. and S.

PUBLIC APPOINTMENTS

MARCH 6.

Cumberland C.C.—Planning Assistant, £450 p.a., plus war bonus. G. O. Lockwood, M.Inst.C.E., County S., Citadel-chbrs., Carlisle.

MARCH 8.

Cheshire E.C.—Full-time Teacher of Building subjects at Macclesfield Technical School. Forms from F. F. Potter, D. of E., County Education Offices, City-rd., Chester.

MARCH 10.

Liverpool E.C.—Full-time Teacher of Heating and Ventilating and allied subjects. Forms from D. of E., 14, Sir Thomas-st., Liverpool, 1.

MARCH 17.

East Lancs Joint Planning Committee.—Planning Officer, £750 p.a. Forms from H. Copland, Secretary, County Offices, Lincoln.

Manchester T.C.—Temporary Senior Appointments in Planning Section of City Sur. Dept. R. H. Adcock, T.C.

MARCH 22.

***Herts C.C.**—Full-time Teacher at Junior Day Technical School in Building, Watford. Forms from Principal, Watford Technical and Art Institute.

***Newcastle-on-Tyne E.C.** — Appointment of Headmaster at Junior Technical School of Building Crafts. £550-£25-£700, plus war allowance. Forms from Thos. Walling, D. of E., City Ed. Office, Northumberland-rd., Newcastle-on-Tyne.

MARCH 31.

West Sussex C.C.—(1) Teacher of Building Subjects at Horsham Building School; (2) Two Masters at Worthing Building School. Forms from D. of E., County Hall, Chichester.

GENERAL BUILDING WORK

Abington.—Rev. H. P. Steer and Parochial Council propose Church Hall.

Altrincham.—T.C. propose essential repairs at Park-dr.; alterations at Railway-st., at £200; and conversion of 2, Manor-rd., into three flats, at £600.

Ashton-under-Lyne.—E.C. propose additional classroom, cloakroom, store and cycle-room at Textile school.—T.C. propose reconditioning property at Stamford-st., Cockbrook, at £587.

Barrow-in-Furness.—T.C. propose crematorium.

Birmingham.—T.C. propose additional nurseries, at £2,150.

Bolton.—T.C. approved additions at Mill Hill Bleach works, for Blair & Sumner, Ltd., bleachers.

Bootle.—T.C. approved additions at Maghull Sanatorium for Board of Governors.

Boston.—Board of Management of Boston General Hospital, South End, received permission to complete new wing.

Bradford.—General Court of Governors of Children's Hospital propose erection of new and extended Children's Hospital.

Bridlington.—E.C. propose reinstatement of "Red House" for annexe as boarding house for High School, at £2,000.

Brighouse.—T.C. propose: Public conveniences at Owler Ings-rd., and at Wellholme Park; conversion of "Brooke House," Atlas Mill-rd., for school clinic.

Huyton-with-Roby. — E.C. propose hutted nursery at Jubilee Park.

Hyde.—T.C. propose additional dressing accommodation, radiation, construction of Turkish Baths and new calorifier at Public Baths, Henry-sq.

Lichfield.—T.C. seeking sanction for completion of 34 houses at Ponesfield.

Middlesbrough.—Thomas Crawford, Middlesbrough, prepared plans for alterations at Borough-rd., for R.C. Diocesan Trustees.—Revised plans approved for 15 houses at Roseberry-rd., for J. H. Crawford.

Preston.—T.C. approved rehabilitation clinic at Stanleyfield-rd., for Preston Royal Infirmary.

Rochdale.—T.C. propose extension to day nursery.—Nursery to be erected at Castleton recreation ground.

St. Pancras.—B.C. propose nursery at Queen's-cres. Plans by A. J. Thomas (F.).

Swadlincote.—U.D.C. propose crematorium.

Tynemouth.—Dr. Oscar Faber, London, is architect for erection of factory.—W. Stockdale, 73, Howard-st., North Shields, prepared plans for additional workshops.

Wolverhampton.—Board of Governors of Wolverhampton and Staffordshire Technical College propose extensions at Stafford-st.—Committee of Y.W.C.A. received approval for erection of prefabricated building for local branch at Masefield-rd., at £2,300.

Worksop.—Notts E.C. propose alterations to out-houses at Newcastle-st. school.

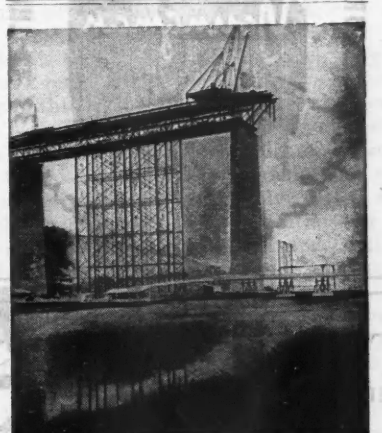
BRITISH RESTAURANTS AND CANTEENS

Ashton-under-Lyne.—T.C. propose conversion of premises at Stamford-st., for extensions to B.R. at Henry-st.

Bolton.—T.C. propose dining centre at St. Bartholomew's Church school.

Bromsgrove.—U.D.C. approved plans for dining-room-scullery at Stourbridge-rd. school, for Worcestershire E.C.

Croydon.—E.C. to submit revised scheme to B. of E. for provision of meals at Oval School, at £1,719.



AFTER THE WAR, THE PLAN; AFTER THE PLAN, BIG BEN STEEL SCAFFOLDING TO BUILD A BETTER BRITAIN . .

The
STEEL SCAFFOLDING CO. LTD.,
82, VICTORIA STREET, LONDON, S.W.1

Dalton-in-Furness.—Lancashire E.C. propose school kitchen.

Derbyshire.—E.C. propose canteen kitchen at Central school, Shirebrook.

Huddersfield.—T.C. propose central school kitchens at Paddock and Woodhouse Hall, at £10,500.

Kingston-on-Thames.—E.C. propose central school canteen at junction of Fairfield-rd. and Fairfield East.

Lancashire.—E.C. propose school kitchen at Coniston C.E. school.

Manchester.—E.C. propose school dining centre and kitchen at "Britannia House," Whalley Range.

Preston.—T.C. approved school kitchens at Brook-st. and Moor Park Open-Air School, for E.C.

Salford.—E.C. propose additional feeding centres at schools and at Salford Grammar school.

Stretford.—E.C. propose central school kitchen.

Tynemouth.—T.C. to resubmit to M.F. plan for B.R. at Ridges-estate.—E.C. propose two school kitchens.

Wallsend.—E.C. propose to set up school feeding centre at St. Columba school.

A.R.P. SCHEMES

LONDON.

Croydon.—E.C. accepted tender of Greenaway & Son, Peckham, at £605, for strengthening shelters at various schools.

Hendon.—B.C. accepted tender of Comben & Wakeling, Ltd., Harrow, at £895, for erection of additional overground shelter at Childs Hill school.

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Chester-le-Street.—For erection of miners' hostel: *J. R. Rutherford & Sons, The Minories, Jesmond, Newcastle-on-Tyne.

Croydon.—Provision of canteen at Howard school, for E.C.: *H. L. Stride, £252 10s.

Durham.—For work at police stations for Standing Joint Committee; alterations at police repair depot: *H. F. Mole, Chester-le-Street, £401; heating installation at police repair depot: *G. Waine & Co., Ltd., Bishop Auckland, £115.

Easington.—For erection of miners' hostel: *H. E. Pitt, Ltd., Leopold-st., Millfield, Sunderland.

Lancaster.—Erection of nursery at Greaves Park, for Health Committee, F. Hill, City E. & S.: *Edmondson Bros., Main-st. Works, Poulton-rd., Morecambe.

Lichfield.—Erection of sub-station, for T.C. B. Straw, City S.: *J. R. Deacon, Ltd., Lombard-st., Lichfield, £2,260.

Liverpool.—Works for T.C.: For extension of operating theatre at Cleaver sanatorium, for T.C.: *W. H. Roberts, Wallasey, £584; repairs to Sand Drier House at Edge-la. works: *C. & G. L. Desoer, Ltd., 4, Marathon-st., Liverpool, £923.

Liverpool.—Erection of maternity unit at Walton Hospital, for T.C.: *Unit Construction Co., Ltd., London, £2,008.

¶London (Air Ministry).—List of new contracts to value of £500 or over for week ended February 26.

Painting work: Amalgamated Building Contractors, Ltd., London, S.W.1; A. Gardner & Co., Nottingham; F. Troy & Co., Ltd., London, N.W.3; P.C.S., Ltd., London, S.W.1.

Tree felling work: Stowmarket Timber Co., Stowmarket.

Building work: Geo. Shears & Sons, Ltd., Bournemouth; T. H. Nichols, Walsall Wood, nr. Walsall; A. N. Coles (Contractors), Ltd., Cardiff.

Heating and hot water supply work: G. N. Haden & Sons, Ltd., London, W.C.1.

Fencing work: W. Norman & Son, Ltd., Leamington Spa.

Land levelling work: E. Doe & Sons, Maldon, Essex.

Electrical work: J. W. Pearce & Co., London, N.W.6.

Civil engineering work: Concrete Proofing Co., Ltd., London, S.W.1; Whitley Moran & Co., Ltd., Liverpool, 6; R. J. Campbell (London), Ltd., Belfast; W. Firth, Ltd., Armthorne, nr. Doncaster; E. H. Burgess, Ltd., London, S.W.1; Sir Alfred McAlpine & Sons, Ltd., Hooton, Ches.

General maintenance work: F. Hossack & Son, Sleaford, Lincs.

¶London (Ministry of Works).—Contracts placed by M.O.W. during week ending February 24:—

Essex: Building work, Hammond & Miles, Grafton-rd. Works, Ilford-la., Ilford.

Gloucester: Building work, Ashmore Contractors, 3, Rooklands Park, Longlevens, Glos.

Hampshire: Building work, Warings (Contractors), Ltd., Hilsea, Portsmouth.
Kent: Building work, W. P. Woodgate, High Haldon, Kent.

Lancs: Building work, Walter Peak, 17, Church-st., Warrington, Lancs.
Sussex: Building work, A. Hudson & Son, 22a, Commercial-rd., Eastbourne.
Warwickshire: Building work, G. E. & W. Wincott, Ltd., 64, Colton-rd., Nuneaton; Morris Jacombs & Sons, Ltd., 71, Hobmoor-rd., Birmingham 10.
Wilts: Building work, Blackford & Son, London-rd., Calne, Wilts.
¶London (War Dept.).—Works contracts placed by War Dept. for week ended February 19:—
Stirlingshire: Hutting (erection), Macleod Builders, Ltd., Glasgow, C.2.
Yorks: Hutting (erection), Beedon, Ltd., Thrybergh, Rotherham.
Staffs: Building work, En-Tout-Cas Co. (Syston), Ltd., Syston, Leics.
Shropshire: Building work, C. Musker Bros., Ltd., Swinton, Manchester.
Bucks: Miscellaneous work, White Bros., High Wycombe, Bucks.
Herts: Miscellaneous work, Wm. French, Hitchin, Herts.
Middx: Heating work, G. N. Haden & Sons, Ltd., London, W.C.1.
Berks: Miscellaneous work, Walden & Son (Henley), Ltd., Henley-on-Thames.
Wilts: Hutting (erection), W. Hayward & Sons (Bournemouth), Ltd., Bournemouth.
Hampshire: Miscellaneous work, Woolford & Sons, Winchester, Hants.
Oldham.—Erection of sanitary annexe at Boundary Park Hospital, Rochdale-rd., for T.C. G. E. Hardy, B.E.: *Schofield & Thompson, Ltd., 30, Hartley-st., Oldham, £720.
St. Marylebone.—For repairs and decoration work at 2 and 3, Hanway-pl., W., for B.C.: *Walter Lawrence & Son, Ltd., Sun-st., Finsbury-sq., E.C.2, £1,167.
St. Pancras.—For adaptation works at 256, Camden-rd., for day nursery, for B.C.: *J. H. & W. Heal, Ltd., £1,536.
Sunderland.—Erection of canteen for River Wear Commissioners: *Gordon Durham, Ltd., Boldon-la., East Boldon, Durham.
Wallsend.—Erection of additional floor to offices: *Purdie & Lumsden, Ltd., Oxford-st., Newcastle-on-Tyne.
York.—Repairs and adaptations at Union-st., and Burtonstone-la., for T.C. C. J. Minter, City E.: *W. Fairbrother & Son, Ltd., Spen-la., York, £458.

OFFICIAL NOTIFICATION

War Damage Act, 1943 (Part II), Business Scheme Premium.

The Board of Trade have, with the approval of the Treasury, decided that in respect of the six months beginning April 1 and ending September 30, the rate of premium payable under any policy issued under the Business Scheme shall continue to be at the rate of 5s. per cent.

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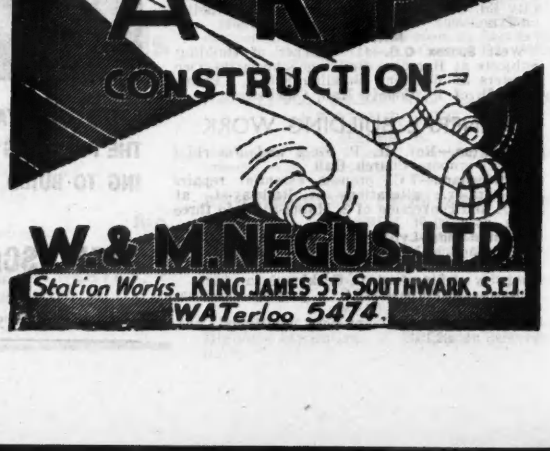
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